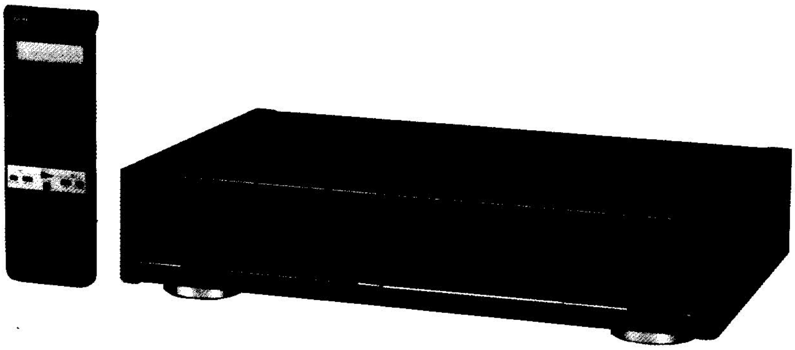
# EV-S1000B
## RMT-451

# SERVICE MANUAL

*French Model*



Hi8

U'MECHANISM

For Mechanical ADJUSTMENTS, refer to the "8 mm Video MECHANICAL ADJUSTMENT MANUAL III" (9-972-732-11)

The electrical and mechanical specifications of EV-S1000B are about the same as those of EV-S1000E AEP, UK Model.
This manual contains only the points which differ from EV-S1000E AEP, UK Model.
Please refer to the EV-S1000E AEP, UK Model Service Manual (9-972-889-11) for the related information not contained in this manual.

- **MAINLY ELECTRICAL DIFFERENCE**

▭ : The Same Contents

| Model / Description | EV-S1000B French Model | EV-S1000E AEP Model | EV-S1000E UK Model | Pages on EV-S1000E Service Manual |
|---|---|---|---|---|
| PS-196 BOARD, COMPLETE | A-7061-815-A | A-7061-815-A | A-7061-898-A | 107 – 171<br>181 – 182 |
| DS-35 BOARD, COMPLETE | A-7061-892-A | A-7061-816-A | A-7061-892-A | 144 – 156 |
| FL-24 BOARD, COMPLETE | A-7061-893-A | A-7061-811-A | A-7062-055-A | 175 – 176<br>179 – 180 |
| TU-100 BOARD, COMPLETE | A-7061-894-A | A-7061-814-A | A-7061-897-A | 167 – 170 |
| FE-17 BOARD, COMPLETE | A-7061-895-A | – | – | – |
| NM-2 BOARD, COMPLETE | – | – | A-7061-899-A | 171 – 172 |
| YC-64 BOARD, COMPLETE | A-7061-900-A | A-7061-900-A | A-7061-896-A | 129 – 133 |

- **SERVICE OF REMOTE COMMANDER RMT-451**

Remote commander RMT-451 is available as a unit. But as individual parts the battery case lid of commander is only available.

# 8 STEREO VIDEO CASSETTE RECORDER

**SONY**®

MICROFILM

# SPECIFICATIONS

## Système

| | |
|---|---|
| **Système d'enregistrement vidéo** | Système FM à balayage hélicoïdal par deux têtes rotatives |
| **Système d'enregitrement audio** (Enregistrement normal) | **Standard:** Système FM à tête rotative (2 canaux)<br>**PCM:** Système PCM (2 canaux) |
| **Système couleur** | Système CCIR, PAL<br>Couleur DDR SECAM à PAL, convertible |
| **Cassettes utilisables** | Cassettes du format vidéo 8 mm |
| **Vitesse de bande** | **SP:** 20,051 mm/sec.<br>**LP:** 10,058 mm/sec. |
| **Durée maximale d'enregistrement/lecture** | **SP:** 1 h 30 min. (avec Sony E5/P5-90)<br>**LP:** 3 h (avec Sony E5/P5-90) |
| **Durée d'avance rapide/rebobinage** | Env. 4 min. (avec Sony E5/P5-90) |

## Modulation par impulsions codées (PCM)

| | |
|---|---|
| **Fréquence d'échantillonnage** | 31,25 kHz |
| **Fréquence audio** | De 20 Hz à 15 kHz |
| **Plage dynamique** | Plus de 90 dB |
| **Pleurage et scintillement** | Moins de 0,005% RMS |

## Section tuner

| | |
|---|---|
| **Couverture des canaux** | **Système B/G:** VHF E2 à E4, E5 à E12<br>UHF E21 à E69<br>Canaux de télévision par câble S3 à S20<br>**Système L:** VHF F2 à F4, F5 à F10<br>UHF F21 à F69<br>Canaux de télévision par câble (B) à Q |
| **Système de programmation** | 60 programmes |
| **Signal de sortie haute fréquence** | Canaux UHF E30 — E39 (variable)<br>75 ohms, asymétrique |
| **Entrée d'antenne** | 75 ohms, prise d'antenne asymétrique |

## Entrées et sorties

| | |
|---|---|
| **LINE IN 1/2** | **VIDEO:** Prise coaxiale phono (1 chaque)<br>1 Vc-c, 75 ohms, asymétrique, sync négative<br>**AUDIO:** Prise coaxiale phono (2 chaque)<br>47 kilohms, −7,5 dBs (0 dBs = 0,775 V rms)<br>**S VIDEO:** Prise mini DIN à 4 broches (1 chaque)<br>Signal de luminance: 1 Vc-c, 75 ohms, asymétrique, sync négative<br>Signal de chrominance: 0,3 Vc-c, 75 ohms, asymétrique |
| **LINE OUT** | **VIDEO:** Prise coaxiale phono (1)<br>1 Vc-c, 75 ohms, asymétrique, sync négative<br>**AUDIO:** Prise coaxiale phono (2 chaque)<br>Impédance de sortie inférieure à 1 kilohm, −7,5 dBs avec charge 10 kilohms, asymétrique<br>**S VIDEO:** Prise mini DIN à 4 broches (1)<br>Signal de luminance: 1 Vc-c, 75 ohms, asymétrique, sync négative<br>Signal de chrominance: 0,3 Vc-c, 75 ohms, asymétrique |
| **MONITOR OUT** | **EURO-AV:** 21 broches (1)<br>Sortie vidéo; broche 19<br>1 Vc-c, 75 ohms, asymétrique, sync négative (avec commande de changement)<br>Signal de luminance: 1 Vc-c, 75 ohms, asymétrique, sync négative<br>Signal de chrominance: broche 15<br>0,3 Vc-c, 75 ohms, asymétrique<br>Sortie audio: broches 1 et 3<br>Impédance de sortie: Moins de 1 kilohm, −6 dBs avec charge 10 kilohms, asymétrique<br>**S VIDEO:** Prise mini DIN à 4 broches<br>Signal de luminance: 1 Vc-c, 75 ohms, asymétrique, sync négative<br>Signal de chrominance: 0,3 Vc-c, 75 ohms, asymétrique |

| | |
|---|---|
| **C+IN/OUT** | Entrée vidéo:<br>7 broches DIN (broche 5) 1 Vc-c, 75 ohms, asymétrique, sync négative<br>Sortie vidéo:<br>Prise DIN à 7 broches (broche 7) 1 Vc-c, 75 ohms, asymétrique, sync négative<br>Entrée audio:<br>Prise DIN à 7 broches (broche 4) 47 kohms, −6 dBs (0dBs=0,775 efficace)<br>Sortie audio:<br>Prise DIN à 7 broches (broche 6) Impédance de sortie moins de 1 kohm, −6 dBs avec charge de 10 kohms, asymétrique |
| **CONTROL L (LANC):** | Panneau arrière: Prise DIN à 5 broches (1)<br>Panneau avant: Prise stéréo mini-mini format (1) |
| **Prise casque (HEADPHONES):** | Prise stéréo mini format (1)<br>−20 dBs, 8 ohms |
| **Entrée microphone (MIC):** | Prise mini format (1)<br>−60 dBs, pour microphone à faible impédance |

## Section minuterie

| | |
|---|---|
| **Horloge** | Verrouillage par cristal |
| **Mode de commande** | Magnétoscope 1/2/3 |
| **Indication horaire** | Par cycle de 24 heures |
| **Réglage horaire** | Seulement pour enregistrement de 6 programmes par mois maximum |
| **Protection minuterie** | Par capaciteur à auto-recharge incorporé<br>Durée de protection: Jusqu'à 1 heure à la fois |

## Données générales

| | |
|---|---|
| **Alimentation** | Secteur 220 V, 50 Hz |
| **Consommation** | 28 W |
| **Température d'exploitation** | De 5 à 40°C (de 41 à 104°F) |
| **Température d'entreposage** | De −20 à 60°C (de −4 à 140°F) |
| **Dimensions** | 470 × 101 × 305 mm (l/h/p)<br>(18 5/8 × 4 × 12 1/8 pouces)<br>(panneaux latéraux en bois compris) |
| **Poids** | 6,5 kg (14 liv. 5 on.) |

## Télécommande sans fil RMT-451

| | |
|---|---|
| **Système de contrôle** | Par infrarouge |
| **Alimentation** | Courant continu 3,0 V, deux piles R6 selon la désignation IEC |
| **Mode de commande** | Magnétoscope 1/2/3 |
| **Dimensions hors tout** | Env. 77 × 18 × 220 mm (l/h/p)<br>(3 1/8 × 3/4 × 8 3/4 pouces) |
| **Poids** | 170 g (5 on.) sans les piles |

## Accessoires fournis

| | |
|---|---|
| Télécommande sans fil RMT-451 avec 2 piles R6 | (1) |
| Câble coaxial 75 ohms | (1) |
| Câble de raccordement audio (2 phono à 2 phono) | (1) |
| Câble de raccordement vidéo (phono à phono) | (1) |
| Câble de raccordement vidéo pour connecteur S VIDEO (DIN 4 broches à DIN 4 broches) | (1) |
| Câble de contrôle (prise stéréo mini-mini format à prise stéréo mini-mini format) | (1) |
| Tournevis | (1) |
| Cassette de nettoyage | (1) |

La conception et les spécifications peuvent être modifiées sans préavis.

**Remarque**
Cet appareil est conforme à la Directive 87/308/EEC de la CEE en ce qui concerne la suppression des interférences.

# SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

**SAFETY-RELATED COMPONENT WARNING!!**

**COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

**ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!**

**LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.**

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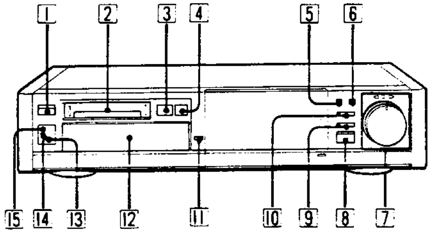
5. EXPLODED VIEWS

This section is extracted from instruction manual.

# Nomenclature



## Panneau avant

1 **Interrupteur de mise sous tension/attente (ON/STANDBY)**

2 **Logement de cassette**

3 **Touche d'éjection (≙ EJECT)**

4 **Témoin d'enregistrement/lecture Hi8**
Il s'allume pour signaler que l'enregistrement ou la lecture Hi8 est possible.

5 **Touche de contrôle de lecteur (PLAYER)**

6 **Touche de contrôle d'enregistreur (RECORDER)**

7 **Bague et témoin de montage à navette (arrière/avant) (EDIT SHUTTLE · REVERSE/FORWARD)**

8 **Touche et témoin de montage synchronisé (SYNCHRO EDIT)**

9 **Touche et témoin d'attente de montage (EDIT STANDBY)**

10 **Touche et témoin de surveillance de montage (EDIT MONITOR)**

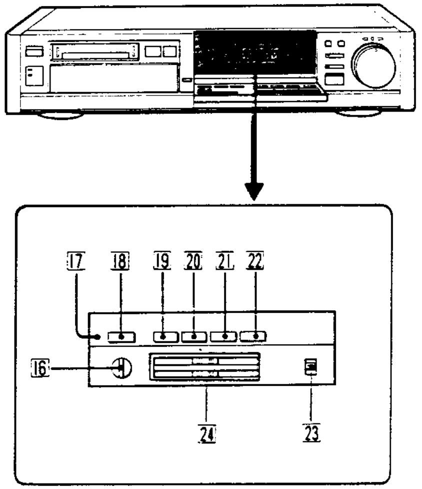
11 **Poussoir d'ouverture (PUSH OPEN)**

12 **Panneau d'affichage**

13 **Capteur de télécommande**

14 **Témoin stéréo haute fidélité (Hi-FI STEREO)**
Il s'allume à la lecture d'une piste audio Hi-Fi, enregistrée en mode bilingue ou stéréo. Il s'allume aussi quand l'enregistrement s'accomplit en mode stéréo ou bilingue sur la piste Hi-Fi.

15 **Témoin de son numérique (PCM)**
Il s'allume à l'enregistrement ou à la lecture de la piste audio PCM.



16 **Réglage du niveau au casque (PHONE LEVEL)**

17 **Touche de réinitialisation**
Appuyer sur cette touche avec un objet pointu, comme un stylo à bille, si le magnétoscope ne fonctionne pas même quand les touches d'exploitation sont enclenchées. Lorsque cette touche est enfoncée, les informations de la mémoire sont effacées. Avant de remettre le magnétoscope en service, procéder à une réinitialisation des informations.

18 **Touche de mode Hi8**

19 **Touche de remise à zéro du compteur (COUNTER RESET)**

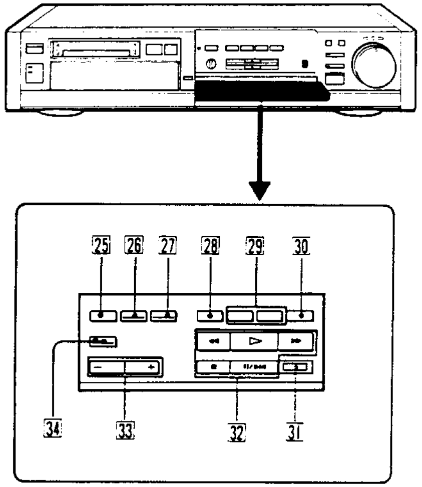
20 **Touche d'antenne TV/magnétoscope (TV/VTR)**

21 **Touche de mode d'enregistrement (REC MODE SP/LP)**

22 **Sélecteur d'entrée (INPUT SELECT)**

23 **Sélecteur de surveillance du son (AUDIO MONITOR)**
[PCM/MIX/STD (Hi-Fi) ]

24 **Réglages du niveau d'enregistrement (REC LEVEL)**



**25** Touche de vérification de minuterie (TIMER CHECK)

**26** Touche de mise en marche/arrêt d'enregistrement par minuterie (TIMER REC ON/OFF)

**27** Touche d'enregistrement instantané par minuterie (QUICK TIMER)

**28** Touche d'indexation (INDEX)

**29** Touches de marquage/effacement d'index (INDEX MARK/ERASE)

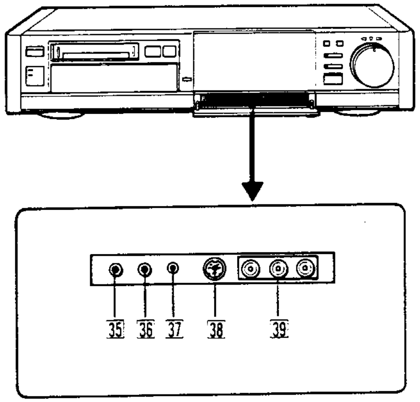
**30** Touche de montage (EDIT)

**31** Touche d'enregistrement (● REC)

**32** Touches de transport de bande
◄◄ REW (rebobinage), ▷ PLAY (lecture), ►► FF (avance rapide), ■ STOP (arrêt), II/►◄◄ PAUSE/STILL (pause/image fixe)

**33** Touches de programme (PROGRAM +/–)

**34** Touche et témoin de copie sonore (AUDIO DUB)



**35** Prise de casque (HEADPHONES) (prise stéréo mini format)

**36** Prise de microphone (MIC) (prise mini format)

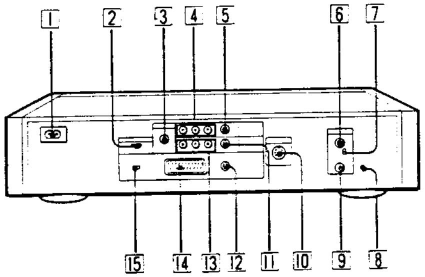
**37** Prise de contrôle L (CONTROL L) (LANC) (prise stéréo mini-mini format)

**38** Connecteur d'entrée de ligne vidéo 2 S (LINE IN 2 S VIDEO) (4 broches mini DIN)

**39** Connecteurs d'entrée de ligne vidéo/audio 2 (LINE IN 2 VIDEO/AUDIO) (prise coaxiale phono)
Lors du branchement d'un équipement monaural sur ces prises, utiliser uniquement la prise LINE IN 2 AUDIO L (MONO).

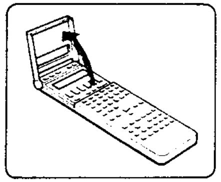
**A propos du connecteur LANC**
Le sigle "LANC" indique le "système à bus de contrôle pour application locale". Le connecteur LANC s'emploie pour contrôler le transport de la bande d'un appareil vidéo et de périphériques qui lui sont raccordés. Ce connecteur remplit la même fonction que les connecteurs, appelés CONTROL L et REMOTE.

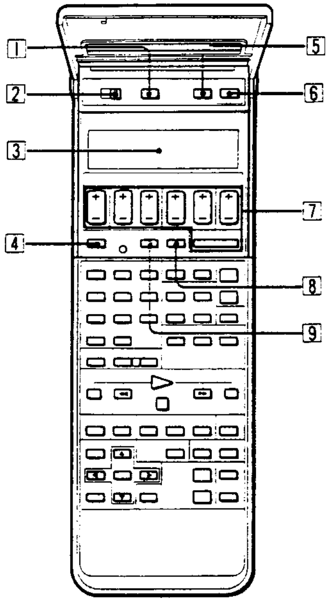
# Nomenclature



## Panneau arrière

1. **Prise d'entrée secteur (AC INPUT)**
2. **Sélecteur de mode de commande (COMMAND MODE)**
3. **Connecteur de contrôle (CONTROL L LANC) (5 broches DIN)**
4. **Prises d'entrée de ligne vidéo/audio 1 (LINE IN 1 VIDEO/AUDIO) (prises coaxiales phono)**
5. **Connecteur d'entrée de ligne vidéo 1 S (LINE IN 1 S VIDEO) (4 broches mini DIN)**
6. **Prise d'entrée d'antenne (AERIAL IN)**
7. **Sélecteur distant/local (DX/LOCAL)**
8. **Vis de canal haute fréquence (RF CHANNEL) (Canaux 30 à 39)**
9. **Prise de sortie d'antenne (AERIAL OUT)**
10. **Connecteur d'entrée/sortie de CANAL PLUS (C+IN/OUT) (7 broches DIN)**
11. **Connecteur de sortie de ligne S vidéo (LINE OUT S VIDEO) (4 broches mini DIN)**
12. **Connecteur de sortie de contrôle S vidéo (MONITOR OUT S VIDEO) (4 broches mini DIN)**
13. **Prises de sortie de ligne vidéo/audio (LINE OUT VIDEO/AUDIO) (prises coaxiales phono)**
14. **Connecteur de sortie de surveillance (MONITOR OUT EURO-AV) (21 broches CENELEC)**
15. **Sélecteur de sortie vidéo (VIDEO OUT) (VIDEO ou S VIDEO)**



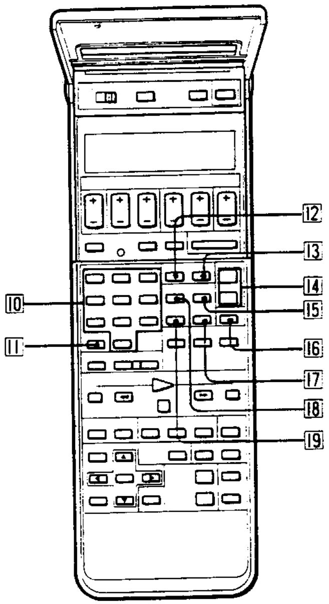


## Télécommande RMT-451

***Avant la mise en service***

- Les touches de la télécommande, portant le même nom ou le même symbole que celles de l'appareil, remplissent la même fonction.
- Les touches sur le dessus desquelles est inscrit un point rouge peuvent servir à contrôler un téléviseur Sony portant la marque ■ , pourvu que le sélecteur de télécommande TV/VTR soit réglé sur TV.
- Laisser le couvercle supérieur fermé, sauf quand il est indiqué de l'ouvrir.

1. **Touche de mise en marche/arrêt d'enregistrement par minuterie (TIMER REC ON/OFF)**
2. **Sélecteur de télécommande de téléviseur/magnétoscope (TV/VTR)**
   Le régler sur VTR pour contrôler à distance ce magnétoscope ou sur TV pour contrôler le téléviseur.
3. **Affichage par cristaux liquides**
4. **Touche de mode commande (COMMAND MODE)**
5. **Sélecteur de téléviseur/magnétoscope (TV/VTR)**
6. **Touche de mise sous tension/attente (⏻)**
7. **Touches de réglage d'enregistrement par minuterie/horloge**
   - ●Jour (DAY)
   - ●Moment de mise en marche (TURN ON)
   - ●Moment de mise à l'arrêt (TURN OFF)
   - ●Position de programme (PROG)
   - ●Transmission des instructions (TRANSMIT)
8. **Touche de mémorisation (MEMORY)**
9. **Touche de réglage d'horloge (CLOCK SET/START)**



**10 Touches numériques de position de programme**
Appuyer pour choisir directement la position de programme. Pour entrer les chiffres des unités, appuyer sur 0, puis sur le numéro souhaité.

**11 Touche des dizaines (–/– –)**
Appuyer pour choisir un numéro de position de programme supérieur à 9. Pour choisir 23, par exemple, appuyer sur –/– –, puis sur 2 et 3.

**12 Sélecteur d'entrée (INPUT SELECT)**
Ouvrir le couvercle pour choisir le signal d'entrée pour l'enregistrement déclenché par minuterie. Refermer le couvercle pour changer le réglage d'entrée actuel.

**13 Sélecteur de mode d'enregistrement (REC MODE)**

**14 Touches de programme (PROG +/–)**

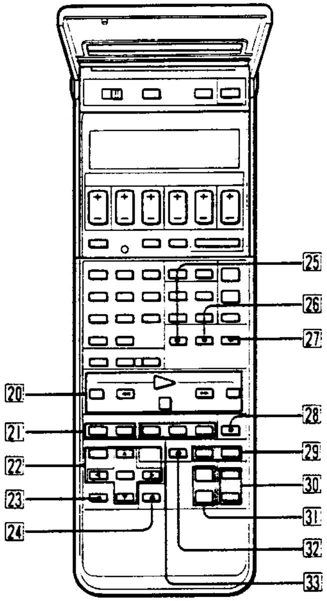
**15 Touche de programme principal/auxiliaire (MAIN/SUB)**

**16 Touche d'indexation (INDEX)**

**17 Touche de remise à zéro du compteur (COUNTER RESET)**

**18 Touche d'écran de données (DATA SCREEN)**

**19 Touche de surveillance de montage (EDIT MONITOR)**



**20 Touches d'exploitation de base**
Touche de pause (❚❚ PAUSE)
Touche d'enregistrement (● REC)
Touche de recherche (⊖/⊕ SEARCH)
Touche de lecture (▷ PLAY)
Touche de rebobinage (◀◀ REW)
Touche d'avance rapide (▶▶ FF)
Touche d'arrêt (■ STOP)

**21 Touches de montage à navette (SHUTTLE EDIT </>)**

**22 Touches d'exploitation de menu**
MENU
EXECUTE
Touches de déplacement du curseur (▲/▼/◀/▶)

**23 Touche de mémorisation de fonction (FUNCTION MEMORY)**

**24 Touche de minuterie sur écran (TIMER ON SCREEN)**

**25 Touche de cadre (❚❚▶ FRAME)**

**26 Touche de ralenti (X 1/5)**

**27 Touche de vitesse double (X 2)**
Quand cette touche est actionnée, le son reproduit change automatiquement en monaural, même si le témoin STEREO est allumé sur le panneau d'affichage.

**28 Touche d'exploration de télévision (TV SCAN)**

**29 Touche de marquage et d'effacement d'index (INDEX MARK et ERASE)**

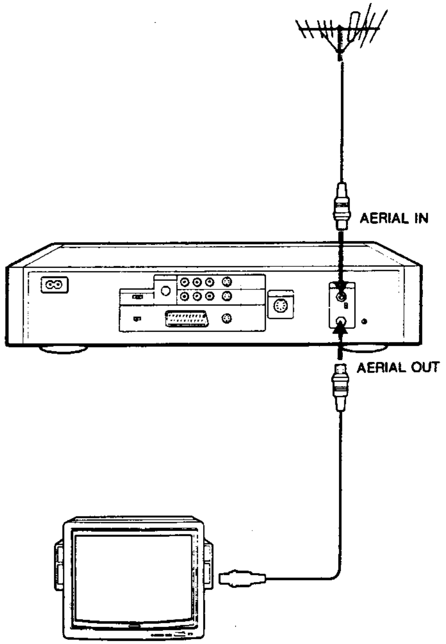
**30 Touches de vérification/annulation de minuterie (TIMER CHECK/TIMER CLEAR)**

**31 Touches de volume du son télévisé (VOL +/–)**
Appuyer pour ajuster l'intensité sonore du téléviseur. Elles agissent seulement sur les téléviseurs Sony, portant le symbole ■ .

**32 Touche de copie de son (AUDIO DUB)**

**33 Touches d'image dans l'image (P in P)**

# Connexions



## Avant d'effectuer les branchements

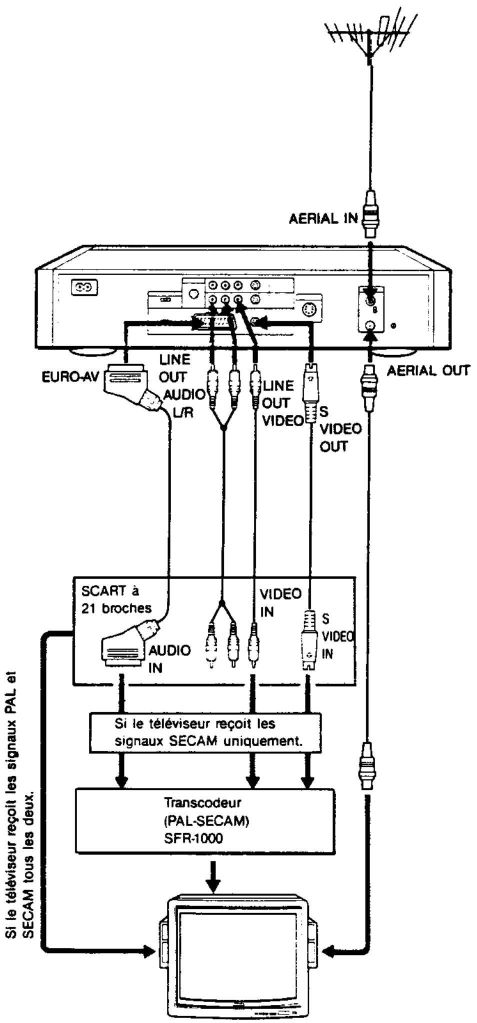
- Mettre hors tension cet appareil et le téléviseur.
- Ne pas brancher le cordon d'alimentation secteur avant d'avoir achevé toutes les autres connexions.
- Effectuer des connexions fermes car un branchement relâché peut entraîner une distorsion des images.

## Branchement d'un téléviseur sans entrées audio/vidéo

**1** **Débrancher le câble d'antenne sur le téléviseur au niveau de sa prise.**

**2** **Raccorder le câble d'antenne sur la borne AERIAL IN du magnétoscope.**

**3** **Raccorder l'entrée d'antenne du téléviseur sur la borne AERIAL OUT du magnétoscope à l'aide du câble fourni.**


AERIAL IN
EURO-AV
LINE OUT AUDIO L/R
LINE OUT VIDEO
S VIDEO OUT
AERIAL OUT
SCART à 21 broches
AUDIO IN
VIDEO IN
S VIDEO IN
Si le téléviseur reçoit les signaux SECAM uniquement.
Transcodeur (PAL-SECAM) SFR-1000
Si le téléviseur reçoit les signaux PAL et SECAM tous les deux.

## Branchement d'un téléviseur avec entrée audio/vidéo

Des branchements sur les entrées audio/vidéo du téléviseur procurent des images de meilleure qualité à la lecture. Les signaux de sortie des bornes EURO-AV, LINE OUT, VIDEO et S VIDEO OUT de ce magnétoscope sont basés sur le système vidéo PAL. Si le téléviseur est d'un modèle uni-système SECAM, un transcodeur PAL-SECAM est requis pour le visionnage de l'image en cours d'enregistrement/de lecture sur ce magnétoscope.

### *Si le téléviseur est doté d'un connecteur EURO-AV*

**1** **Effectuer les démarches 1 à 3 sous "Branchement d'un téléviseur sans entrées audio/vidéo".**

**2** **Raccorder la borne LINE OUT AUDIO/MONITOR OUT EURO-AV du magnétoscope sur la borne d'entrée audio/EURO-AV du téléviseur à l'aide d'un câble en option.**

**3** **Régler le sélecteur VIDEO OUT (VIDEO ou S VIDEO) du panneau arrière sur S VIDEO pour obtenir des images dont le signal de luminance et de chrominance est séparé, c'est-à-dire le même que le signal vidéo provenant du connecteur S VIDEO. Régler sur VIDEO pour obtenir les signaux vidéo standards.**

### *Si le téléviseur est doté d'un connecteur d'entrée S VIDEO*

**1** **Effectuer les démarches 1 à 3 sous "Branchement d'un téléviseur sans entrées audio/vidéo".**

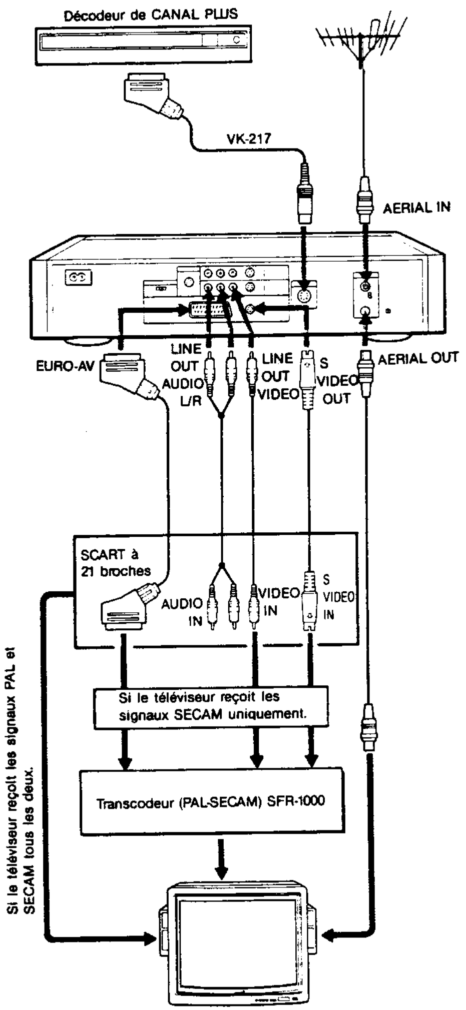
**2** **Raccorder la borne LINE OUT AUDIO/MONITOR OUT S VIDEO du magnétoscope sur l'entrée AUDIO/S VIDEO du téléviseur à l'aide du câble fourni.**

### *Si le téléviseur est doté de prises d'entrée audio/vidéo*

**1** **Effectuer les démarches 1 à 3 sous "Branchement d'un téléviseur sans entrées audio/vidéo".**

**2** **Raccorder les prises LINE OUT AUDIO/VIDEO du magnétoscope sur les prises d'entrée audio/vidéo du téléviseur.**

**Remarques**
- Si ce magnétoscope est raccordé à un téléviseur ou à un moniteur qui ne possède pas d'entrée S VIDEO et que le sélecteur VIDEO OUT (VIDEO ou S VIDEO) est réglé sur S VIDEO, l'image sera affichée sur l'écran, mais sans couleur.
- Eviter d'effectuer simultanément les connexions VIDEO et S VIDEO.
- L'affichage sur écran ne sera pas fourni au téléviseur si le branchement est effectué via les prises LINE OUT AUDIO/VIDEO.

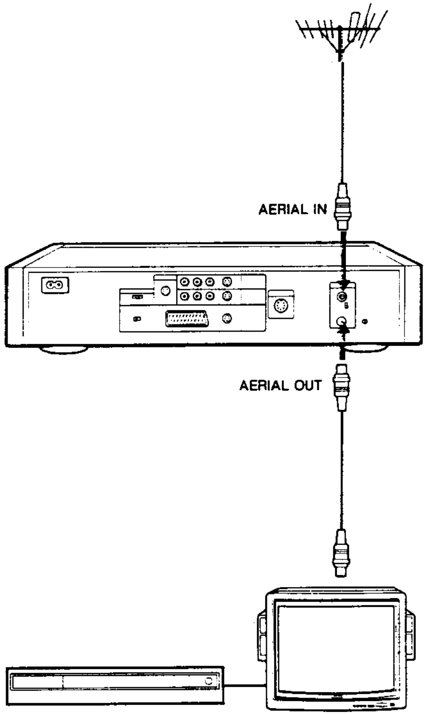

Décodeur de CANAL PLUS
VK-217
AERIAL IN
EURO-AV
LINE OUT AUDIO L/R
LINE OUT VIDEO
S VIDEO OUT
AERIAL OUT
SCART à 21 broches
AUDIO IN
VIDEO IN
S VIDEO IN
Si le téléviseur reçoit les signaux SECAM uniquement.
Transcodeur (PAL-SECAM) SFR-1000
Si le téléviseur reçoit les signaux PAL et SECAM tous les deux.

## Connexion pour la réception de CANAL PLUS

Ce magnétoscope est capable de recevoir et d'enregistrer des émissions CANAL PLUS en utilisant un décodeur de CANAL PLUS.
Procéder aux connexions en se référant à l'exemple.

**1** **Raccorder le magnétoscope au téléviseur en se reportant à "Connexions".**

**2** **Raccorder la borne C+ IN/OUT du magnétoscope au décodeur de CANAL PLUS à l'aide d'un cordon VK-217 en option.**


AERIAL IN
AERIAL OUT

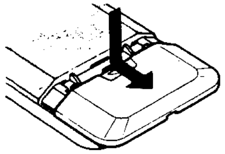
## Pour regarder un programme CANAL PLUS pendant l'enregistrement d'une émission télévisée ordinaire

**1** **Raccorder le magnétoscope au téléviseur en se référant à "Connexions".**

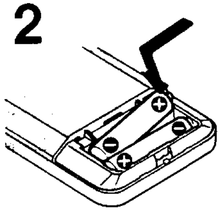
**2** **Raccorder le téléviseur au décodeur de CANAL PLUS à l'aide d'un cordon approprié.**

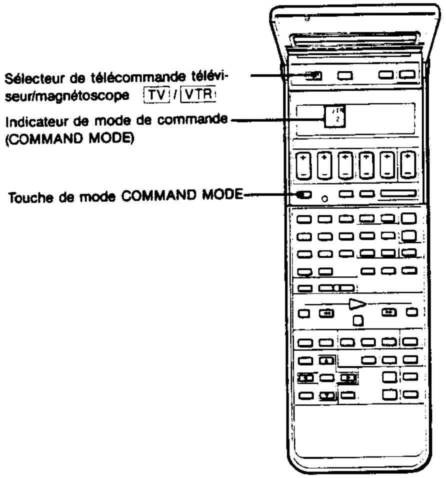
# Exploitation télécommandée

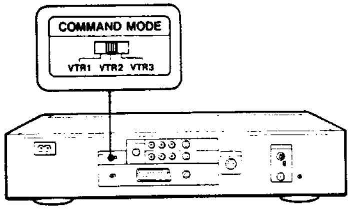
1



2




Sélecteur de télécommande téléviseur/magnétoscope TV / VTR
Indicateur de mode de commande (COMMAND MODE)
Touche de mode COMMAND MODE



## Préparation de la télécommande

### *Mise en place des piles*

1 **Glisser le couvercle pour le retirer.**

2 **Installer deux piles R6 (format AA) en respectant leurs polarités.**

3 **Refermer le couvercle.**
L'horloge de la télécommande indique –D–:– –. Régler la date et l'horloge en se référant à "Réglage de la date et de l'horloge".

### *Réglage du mode de commande*

Régler le sélecteur COMMAND MODE à l'arrière de ce magnétoscope au même numéro que celui qui est indiqué sur l'affichage. Normalement, régler sur VTR 2. Pour changer le réglage sur la télécommande, appuyer de façon répétée sur COMMAND MODE.

**Remarque sur les piles**
A raison d'une exploitation normale, les piles dureront pendant six mois environ. Si l'on prévoit de ne pas utiliser la télécommande pendant longtemps, en retirer les piles pour éviter les dégâts qu'y provoquerait une fuite de leur électrolyte.

## Télécommande d'autres appareils Sony

### *Contrôle d'un autre magnétoscope, muni d'un sélecteur de mode de commande*

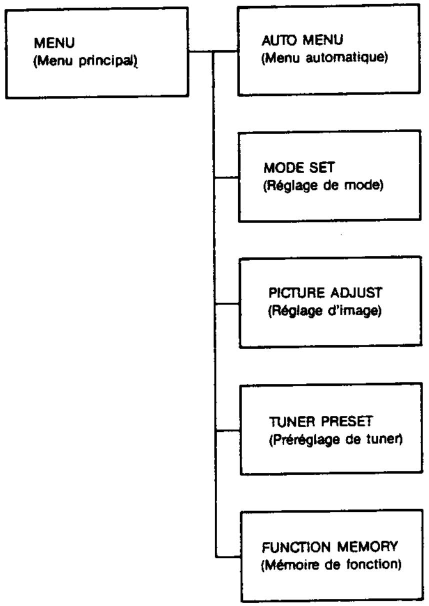
Régler des modes de commande différents pour ce magnétoscope (par exemple VTR 2) et pour l'autre magnétoscope (VTR 1). Choisir VTR 1 sur la télécommande pour contrôler l'autre magnétoscope et choisir VTR 2 pour contrôler celui-ci.

### *Contrôle d'un appareil sans sélecteur de mode de commande*

Changer comme suit le réglage sur la télécommande pour contrôler chaque type de magnétoscope.

**VTR 1:** Magnétoscopes à télécommande par infrarouge Sony Betamax
**VTR 2:** Magnétoscopes à télécommande par infrarouge Sony 8 mm
**VTR 3:** Magnétoscopes à télécommande par infrarouge Sony VHS

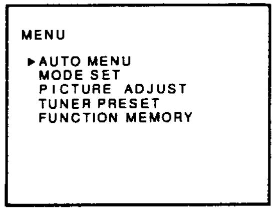
# Le système Menu


MENU
(Menu principal)
AUTO MENU
(Menu automatique)
MODE SET
(Réglage de mode)
PICTURE ADJUST
(Réglage d'image)
TUNER PRESET
(Préréglage de tuner)
FUNCTION MEMORY
(Mémoire de fonction)

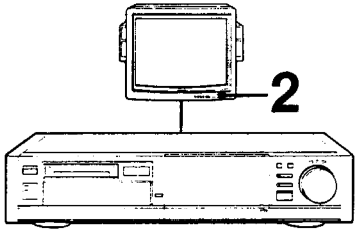
## Aperçu

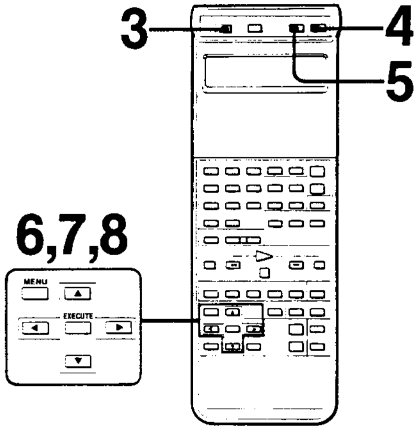
Ce magnétoscope fait appel à un "système Menu" par lequel sont effectués les divers réglages et ajustements, nécessaires à l'exploitation. Le système menu de cet appareil comprend cinq affichages de menus différents qu'il est possible de choisir à partir du MENU principal.

Consulter les pages suivantes pour les détails sur chaque menu.



```
MENU

▸AUTO MENU
 MODE SET
 PICTURE ADJUST
 TUNER PRESET
 FUNCTION MEMORY
```




3
4
5
6,7,8
MENU
EXECUTE

### Appel de l'affichage de Menu

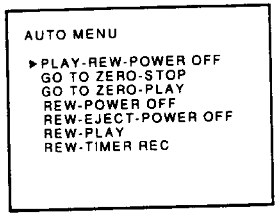
1. **Confirmer que le magnétoscope et le téléviseur sont correctement raccordés.**
   Raccorder le magnétoscope et le téléviseur à l'aide de la prise AERIAL OUT, du connecteur MONITOR OUT EURO-AV ou du connecteur MONITOR OUT S VIDEO sur le magnétoscope en se reportant au chapitre "Connexions".
2. **Mettre le téléviseur sous tension.**
   Choisir la position de programme pour la lecture par magnétoscope si le branchement est effectué à l'aide de la prise AERIAL OUT sur le magnétoscope. Choisir l'entrée de magnétoscope si le branchement est effectué à l'aide du connecteur MONITOR OUT EURO-AV ou S VIDEO.
3. **Régler le sélecteur de télécommande TV/VTR sur VTR.**
4. **Appuyer sur ON/STANDBY.**
5. **Appuyer sur TV/VTR pour allumer le témoin VTR**
   Quand le branchement est effectué via la prise AERIAL OUT sur le magnétoscope.
6. **Appuyer sur MENU.**
   Le MENU principal apparaît alors sur l'écran.
7. **Choisir le menu souhaité en déplaçant le curseur.**
   Appuyer sur ▲ pour remonter ou sur ▼ pour descendre sur la liste.
8. **Appuyer sur EXECUTE.**
   Le menu choisi apparaît alors sur l'écran du téléviseur.

***Effacement de l'affichage du menu***
Appuyer une nouvelle fois sur MENU.

**Remarque**
L'affichage du menu n'apparaîtra pas sur l'écran du téléviseur si le branchement a été effectué via le connecteur LINE OUT S VIDEO ou les prises LINE OUT VIDEO.

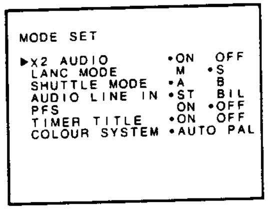
## Le système Menu

**_Menu automatique (AUTO MENU)_**
Le magnétoscope peut être réglé pour passer à la séquence d'exploitation souhaitée. En ce qui concerne le fonctionnement réel, voir sous "Désignation du mode d'exploitation souhaité" en page 46.



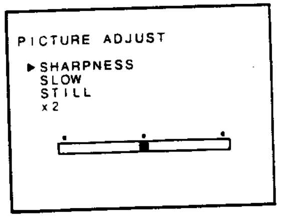
```
AUTO MENU

▶PLAY-REW-POWER OFF
 GO TO ZERO-STOP
 GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
 REW-TIMER REC
```

**_Réglage de mode (MODE SET)_**
Divers réglages de mode peuvent être effectués à partir de ce menu. En ce qui concerne les détails sur chaque réglage, voir sous "Réglage du mode" en page 31.



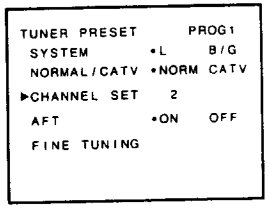
```
MODE SET

▶X2 AUDIO         •ON   OFF
 LANC MODE         M   •S
 SHUTTLE MODE     •A    B
 AUDIO LINE IN    •ST   BIL
 PFS               ON  •OFF
 TIMER TITLE      •ON   OFF
 COLOUR SYSTEM    •AUTO PAL
```

**_Réglage d'image (PICTURE ADJUST)_**
L'image reproduite peut être ajustée à partir de ce menu pour en obtenir la qualité optimale. Voir sous "Réglages de l'image" en page 41.



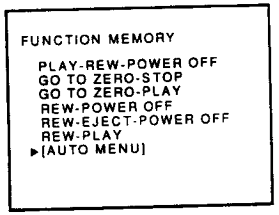
```
PICTURE ADJUST

▶SHARPNESS
 SLOW
 STILL
 x2
```

**_Préréglage de tuner (TUNER PRESET)_**
Le préréglage des canaux actifs et la syntonisation précise d'une station faible sont possibles à partir de ce menu. En ce qui concerne les applications réelles, voir sous "Préréglage des canaux actifs" en page 27.



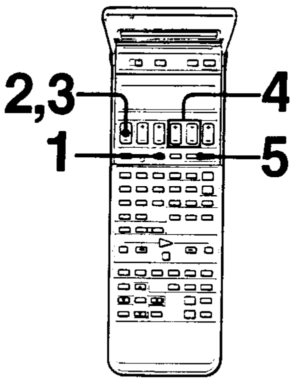
```
TUNER PRESET            PROG1
 SYSTEM          •L      B/G
 NORMAL/CATV     •NORM  CATV
▶CHANNEL SET       2
 AFT             •ON     OFF
 FINE TUNING
```

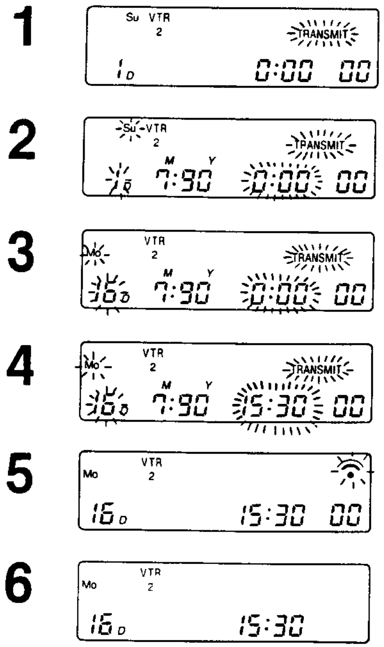
**_Mémoire de fonction (FUNCTION MEMORY)_**
Une séquence d'opérations données à exécuter par le magnétoscope peut être mémorisée par la touche FUNCTION MEMORY de la télécommande. Une simple poussée sur la touche FUNCTION MEMORY lancera alors la séquence en question. Voir sous "Attribution d'un mode de menu automatique à la touche FUNCTION MEMORY" en page 48.



```
FUNCTION MEMORY

 PLAY-REW-POWER OFF
 GO TO ZERO-STOP
 GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
▶[AUTO MENU]
```

## Réglage de la date et de l'horloge





### Avant de commencer les réglages

Par la télécommande, il est possible de régler l'heure et la date entre les années 1990 et 2004.

### Marche à suivre

**Exemple:** Pour régler à 15h30, le lundi 16 juillet 1990.

1 **Ouvrir le couvercle et appuyer sur CLOCK SET.**

2 **Appuyer sur la touche D (date) jusqu'à affichage de 7 M 90 Y (c.à.d. 7e mois de 1990).**
Les jours avanceront lentement de 30 jours, puis le mois avancera.

3 **Appuyer sur le côté + ou – de la touche D (Jour) jusqu'à affichage de 16 D (16e jour).**
Le jour de la semaine apparait automatiquement.

4 **Appuyer sur les touches H (heure) et M (minute) sous TURN OFF pour régler à 15 h 30.**

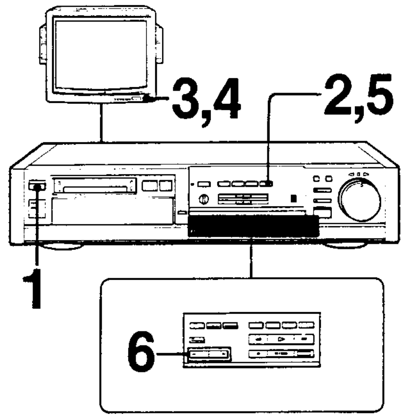
5 **Diriger la télécommande vers le magnétoscope et appuyer sur TRANSMIT.**
Une tonalité confirme que les réglages de la date et de l'horloge sont mémorisés par le magnétoscope.

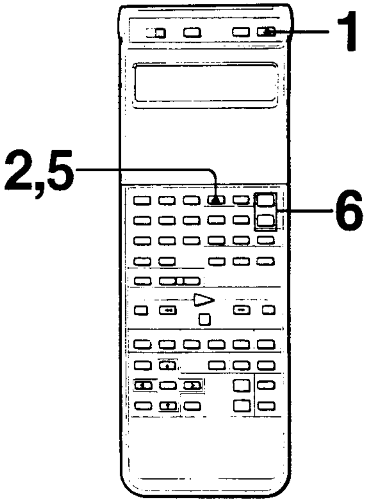
6 **Vérifier le panneau d'affichage de l'appareil et refermer le couvercle.**

**Si l'indication 0:00 clignote sur l'appareil**
Si l'alimentation électrique a été interrompue pendant plus d'une heure, l'indication 0:00 clignotera lors de la remise sous tension. Dans ce cas, il est nécessaire de recommencer les réglages de la date et de l'heure.

**Si une brève tonalité retentit de façon répétée**
Le magnétoscope se trouve en mode d'enregistrement par minuterie ou d'enregistrement instantané par minuterie et les réglages ne peuvent donc pas être transmis.

## Ajustement du téléviseur





### Avant de commencer

Si le magnétoscope et le téléviseur ont été raccordés à l'aide de la borne AERIAL OUT du magnétoscope, une des positions de programme de télévision doit être ajustée pour recevoir le signal de lecture du magnétoscope. Si le raccordement entre le téléviseur et le magnétoscope a été effectué d'une autre façon, sauter cette étape.

### Marche à suivre

1 **Effectuer les branchements en se référant à "Connexions" et appuyer sur ON/STANDBY.**

2 **Appuyer sur INPUT SELECT pour allumer LINE L2 sur le panneau d'affichage.**
Ne raccorder aucun équipement sur la prise LINE IN 2 VIDEO.

3 **Mettre le téléviseur sous tension et choisir une position de programme, non utilisée pour la réception des stations de télévision.**

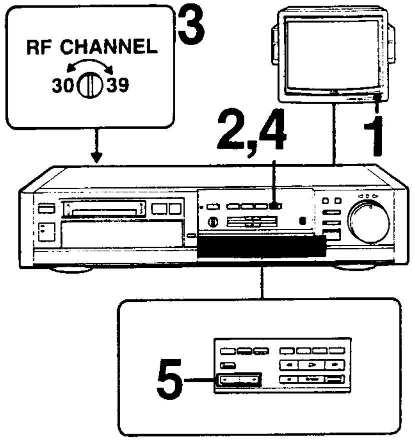
4 **Faire l'accord du téléviseur de sorte qu'un écran bleu, indiquant le compteur horaire et la vitesse de bande, soit clairement visible sur le téléviseur.**

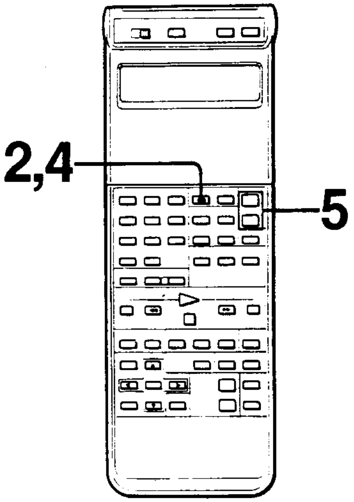
5 **Appuyer sur INPUT SELECT pour allumer TUNER sur le panneau d'affichage.**

6 **Appuyer sur PROG (PROGRAM) +/– et confirmer que l'écran change à un autre programme.**

Le téléviseur est alors accordé pour recevoir l'image reproduite par le magnétoscope. Avant la lecture d'une bande vidéo, choisir la position de programme, définie à l'étape 3. Si l'on hésite sur la manière d'accorder le téléviseur, consulter le mode d'emploi de ce dernier ou s'adresser à un concessionnaire.

## Ajustement du téléviseur





### Si l'image de lecture est perturbée

1 **Sur le téléviseur, choisir une position de programme entre les canaux UHF 30 et 39, de manière qu'aucune image n'apparaisse sur l'écran et qu'un grésillement constant ou aucun bruit ne soit entendu.**

2 **Appuyer sur INPUT SELECT pour allumer LINE L2 sur le panneau d'affichage.**
Ne raccorder aucun équipement sur la prise LINE IN 2 VIDEO.

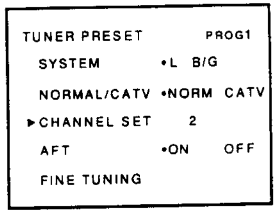
3 **Tourner la vis RF CHANNEL à l'aide du tournevis fourni jusqu'à obtention d'un écran non perturbé.**

4 **Appuyer sur INPUT SELECT pour allumer TUNER sur le panneau d'affichage.**

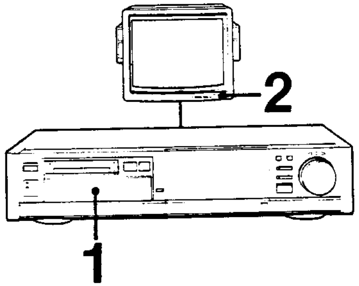
5 **Appuyer sur la touche PROG (PROGRAM) +/– et confirmer que l'écran change à un programme différent.**

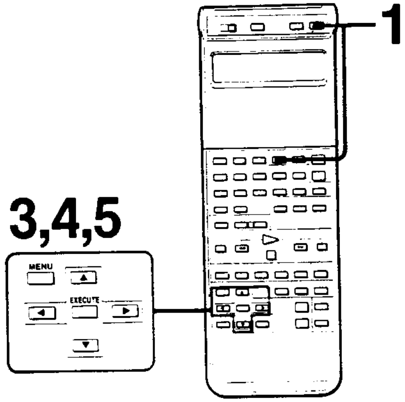
---

## Préréglage des canaux actifs



```
TUNER PRESET              PROG1
  SYSTEM          •L  B/G
  NORMAL/CATV     •NORM  CATV
▶CHANNEL SET       2
  AFT             •ON     OFF
  FINE TUNING
```





### Avant de commencer

- Ce magnétoscope permet de recevoir les canaux suivants:
  **Système L:** Canaux VHF F2 — F4, F5 — F10
  Canaux UHF F21 — F69
  Canaux de télévision par câble (B) — Q
  **Système B/G:** Canaux VHF E2 — E4, E5 — E12,
  Canaux UHF E21 — E69. et
  canaux par câble S3 — S20
- Les canaux recevables dépendent du système de radiodiffusion télévisée de sa région.
- Un maximum de 60 stations peuvent être affectées à n'importe quelle position de programme.
- Le menu de préréglage du tuner (TUNER PRESET) peut être affiché seulement si la connexion magnétoscope — téléviseur a été faite via la prise AERIAL OUT du magnétoscope, le connecteur MONITOR OUT EURO-AV ou S VIDEO.

### Appel du menu TUNER PRESET

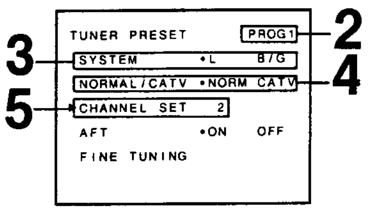
1 **Mettre le magnétoscope sous tension et appuyer sur INPUT SELECT pour allumer le témoin TUNER et le numéro de la position de programme sur le panneau d'affichage.**

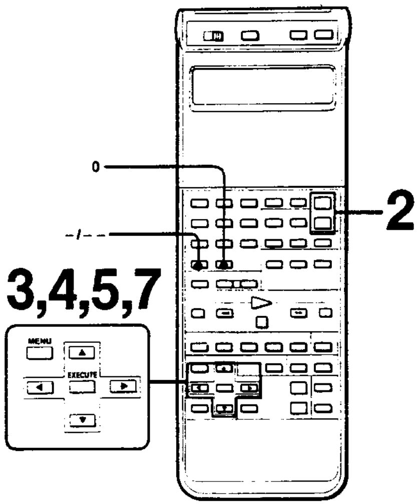
2 **Mettre le téléviseur sous tension.**
Régler à la position de programme pour la lecture du magnétoscope si la connexion magnétoscope — téléviseur a été faite via la prise AERIAL OUT sur le magnétoscope.
Choisir l'entrée VTR si la connexion magnétoscope — téléviseur a été faite via la borne MONITOR OUT EURO-AV ou S VIDEO.

3 **Appuyer sur MENU tandis que le magnétoscope est en mode d'arrêt.**
Le MENU principal apparaît.

4 **Par les touche "▲00 ou "▼", amener le curseur sur TUNER PRESET.**

5 **Appuyer sur EXECUTE.**
Le menu de préréglage de tuner (TUNER PRESET) apparaît.





## Accord d'un canal souhaité

**1** **Appeler le menu TUNER PRESET.**

**2** **Choisir la position de programme souhaitée en appuyant sur PROG (PROGRAM) +/–.**

**3** **Amener le curseur sur la ligne SYSTEM à l'aide de la touche ▲ ou ▼. Choisir L pour recevoir des signaux SECAM ou B/G pour des signaux PAL à l'aide de la touche ◀ ou ▶.**

**4** **Amener le curseur sur la ligne NORMAL/CATV à l'aide de la touche ▲ ou ▼. Choisir NORM** pour recevoir des programmes normaux ou CATV pour des programmes CATV à l'aide de **la touche ◀ ou ▶.**

**5** **Amener le curseur sur CHANNEL SET par les touches "▲" ou "▼" et continuer d'appuyer sur ◀ ou ▶.**
Le numéro de canal augmente automatiquement par la touche ▶ et il diminue par la touche ◀. Le numéro cesse de changer quand le premier canal recevable dans sa région est détecté et ce canal est alors affiché sur l'écran.

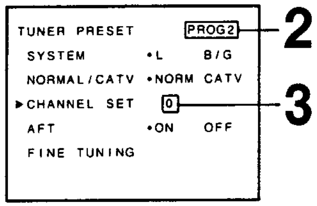
**6** **Pour attribuer un canal à la position de programme suivante, répéter les étapes de 1 à 5.**

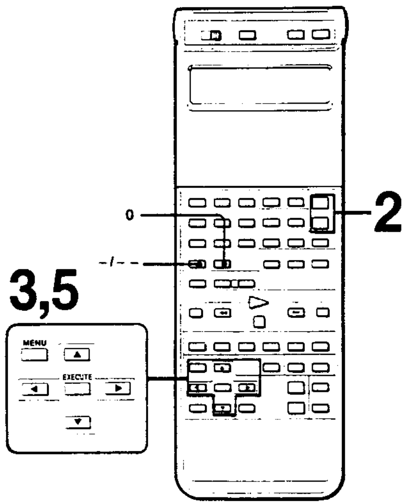
**7** **Appuyer sur EXECUTE pour mémoriser les canaux attribués et repasser à l'écran original.**

### *Affectation directe des canaux*

A l'étape 5 sous "Accord d'un canal souhaité", amener le curseur sur CHANNEL SET. Entrer les numéros de programme souhaités à l'aide des touches numériques de position de programme et de la touche –/– –. Pour entrer un numéro d'un chiffre, appuyer sur 0, puis sur le chiffre souhaité. Pour entrer un numéro de deux chiffres, appuyer sur –/– –, sur le numéro de la dizaine et enfin sur le numéro de l'unité.

**Remarque**
Si l'image obtenue sur l'écran à l'étape 5 est si distordue que l'on ne peut lire l'écran de menu, débrancher d'abord le câble d'antenne au niveau de la prise AERIAL IN, répéter ensuite l'étape 5 et rebrancher ensuite le câble d'antenne sur la prise AERIAL IN.
**Balayage des canaux sur le téléviseur**
Quand la touche ▶ est enfoncée aux étapes 5 et 6, les canaux sont balayés dans l'ordre suivant. Quand la touche ◀ est enfoncée, le balayage des canaux s'effectue dans l'ordre inverse.
**SYSTEME L: VHF (F2-F10) → UHF (F21-F69) → CATV (B-Q)**
**SYSTEME B/G: VHF (E2-E21) → UHF (E21-E69) → CATV (S3-S20)**





## Effacement des positions de programme inutiles

Il est possible de programmer le magnétoscope de manière que seules apparaissent les positions de programme souhaitées quand on appuie sur PROG (PROGRAM) +/–.

**1** **Appeler le menu TUNER PRESET.**

**2** **Appuyer sur PROG (PROGRAM) +/– pour appeler la position de programme superflue.**

**3** **Appuyer sur –/– –, puis sur 0, ou maintenir la touche ◀ ou ▶ enfoncée jusqu'à affichage de 0.**

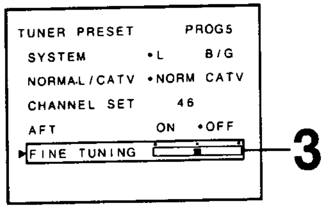
**4** **Répéter les étapes 2 et 3 pour chacune des positions de programme à effacer.**

**5** **Appuyer sur EXECUTE.**

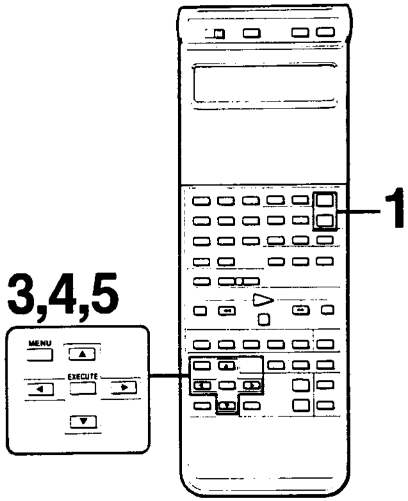
### *Pour entrer à nouveau une position de programme effacée*

Effectuer les démarches expliquées sous "Accord d'un canal souhaité".

## Préréglage des canaux actifs



```
TUNER PRESET          PROG5
 SYSTEM          •L     B/G
 NORMAL/CATV     •NORM  CATV
 CHANNEL SET       46
 AFT              ON   •OFF
▶FINE TUNING
```



### Accord manuel précis sur une station faible

Si la position AFT ON est choisie sur le menu TUNER PRESET, le magnétoscope effectuera automatiquement la syntonisation des canaux. Toutefois, si l'image d'un canal reçu par le magnétoscope est distordue à cause d'interférences des signaux, on pourra y remédier en procédant à une syntonisation manuelle précise.

1 **Choisir la position de programme distordue en appuyant sur la touche PROG (PROGRAM) +/–.**

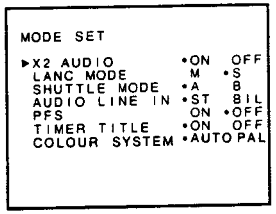
2 **Appeler le menu TUNER PRESET.**

3 **Amener le curseur sur FINE TUNING.**

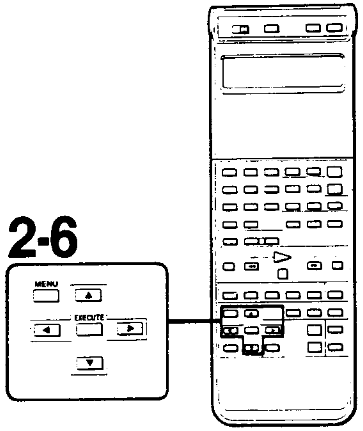
4 **Appuyer sur la touche ◀ ou ▶ jusqu'à obtention de la meilleure image possible.**
L'indication AFT OFF sera automatiquement choisie et l'indicateur de syntonisation précise apparaît.

5 **Appuyer sur EXECUTE pour mémoriser cette position et repasser ensuite à l'écran original.**

## Réglage du mode



```
MODE SET

▶X2 AUDIO          •ON   OFF
 LANC MODE          M   •S
 SHUTTLE MODE      •A    B
 AUDIO LINE IN     •ST   BIL
 PFS                ON  •OFF
 TIMER TITLE       •ON   OFF
 COLOUR SYSTEM     •AUTO PAL
```



Vérifier le réglage sur le menu MODE SET avant d'utiliser le magnétoscope. Procéder aux changements selon les modes de fonctionnement que l'on veut obtenir de son magnétoscope.

### Marche à suivre

1 **Appuyer sur MENU.**
Le MENU principal apparaît.

2 **Amener le curseur sur MODE SET à l'aide de la touche "▲" ou "▼".**

3 **Appuyer sur EXECUTE.**
Le menu de réglage de mode (MODE SET) apparaît

4 **Choisir le mode à ajuster à l'aide de la touche "▲" ou "▼".**

5 **Choisir le mode souhaité par la touche ◀ ou ▶.**

6 **Appuyer sur EXECUTE.**
Le mode choisi sera mémorisé et le menu MODE SET disparaît.

## Détails sur le menu de réglage de mode "MODE SET"

***X 2 AUDIO ON/OFF***

Choisir la position ON si l'on souhaite entendre le son pendant la lecture à vitesse double (X 2) et il sera automatiquement changé en monaural. Choisir la position OFF si l'on ne désire pas entendre le son pendant cette lecture.

***LANC MODE M/S***

Cette sélection est nécessaire lors du contrôle à distance d'un autre équipement vidéo par ce magnétoscope, ou lors du contrôle de ce magnétoscope à partir d'un autre équipement vidéo via le connecteur CONTROL L. Choisir M pour contrôler un autre équipement vidéo par ce magnétoscope, ou choisir S pour contrôler ce dernier par un autre équipement vidéo.

Remarquer que le magnétoscope se placera automatiquement en mode LANC MODE "M" dans les cas suivants:

1) Si la touche de contrôle PLAYER est actionnée et qu'elle est allumée.
2) Si la touche EDIT STANDBY est actionnée et qu'elle est allumée.

Dans ce cas, ce magnétoscope ne peut pas être contrôlé à partir de l'autre appareil vidéo. Pour revenir au mode LANC MODE S, appeler le menu MODE SET et choisir la ligne LANC MODE S.

***SHUTTLE MODE A/B***

Changer ce réglage en fonction du type d'équipement vidéo que l'on désire contrôler à partir de ce magnétoscope. Choisir "A" si une télécommande avec fonction JOG/SHUTTLE (impulsion/navette) ne peut pas être utilisée pour l'autre équipement vidéo. Par contre, choisir "B" si une télécommande avec fonction JOG/SHUTTLE peut être utilisée pour l'autre équipement vidéo.

***AUDIO LINE IN ST (stéréo)/BIL (bilingue)***

Choisir "ST" pour recevoir les sources de programme stéréo par les prises AUDIO LINE IN. Choisir "BIL" pour recevoir les sources de programme bilingue par les prises AUDIO LINE IN.

***PFS (Sélection d'image fine)***

Si l'image est distordue ou présente des traînées, choisir ON ou OFF selon la position qui fournit les meilleurs résultats. Normalement, choisir OFF.

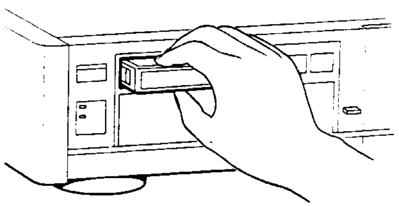
***TIMER TITLE ON/OFF***

Choisir ON pour lancer un enregistrement par minuterie avec un titre "minuterie". Sinon, choisir OFF. Voir en page 61 pour les détails sur "Enregistrement d'un titre de minuterie".

***COLOUR SYSTEM AUTO/PAL***

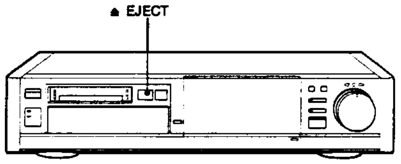
Normalement, régler sur AUTO. Selon le programme télévisé, le système couleur sera automatiquement commuté sur SECAM ou sur PAL. Choisir PAL si le signal est trop faible ou si l'image est distordue. Les programmes SECAM risquent de ne pas apparaître parfaitement.

# Maniement des cassettes vidéo



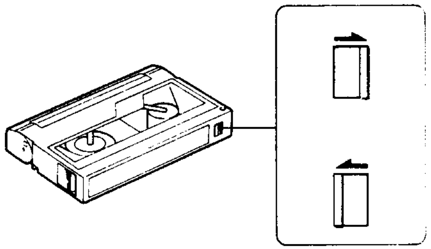
### Insertion de la cassette

Installer la cassette en la poussant légèrement, sa fenêtre dirigée vers le haut. L'insertion de la cassette entraine la mise sous tension automatique du magnétoscope.



### Ejection de la cassette

Appuyer sur ≜ EJECT de l'appareil. Si l'appareil est hors tension, la poussée sur la touche ≜ EJECT le mettra sous tension, éjectera la cassette et coupera à nouveau l'alimentation. La touche ≜ EJECT n'agit pas pendant l'enregistrement ou en mode de pause à l'enregistrement.



### Protection contre l'effacement

Le fait d'enregistrer sur une bande déjà enregistrée aura pour conséquence d'effacer les informations qui s'y trouvaient. Pour éviter un effacement accidentel, glisser le segment rouge de la cassette de manière à couvrir la cavité.

### Durée d'enregistrement/lecture

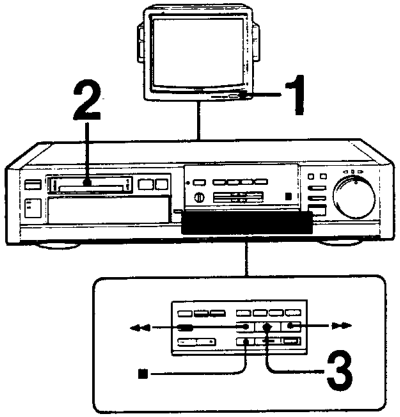
La durée d'enregistrement d'une cassette en mode LP est double de celle du mode SP. Cependant, pour obtenir des images d'excellente qualité, l'emploi du mode SP est conseillé. La vitesse d'enregistrement se choisit par la touche REC MODE, tandis que, pour la lecture, la sélection de la vitesse est automatique.

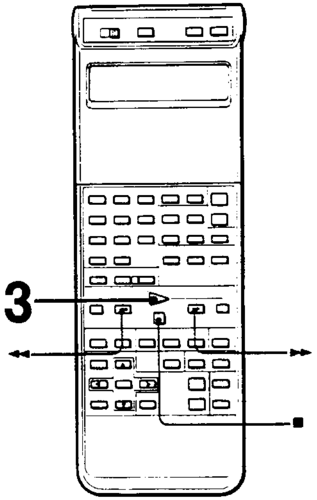
| Type de cassette | Mode SP | Mode LP |
|---|---|---|
| P5-15MP | 15 min. | 30 min. |
| P5-30MP/E5-30HME | 30 min. | 1 heure |
| P5-60MP/E5-60HME | 60 min. | 2 heures |
| P5-90MP/E5-90HME | 90 min. | 3 heures |

**Remarques sur les cassettes**

- Ne jamais rien insérer dans les petits orifices à l'arrière de la cassette car c'est par leur forme que le magnétoscope distingue entre les cassettes Hi8 et les cassettes 8 mm standard.
- Ranger les cassettes dans leur étui et les conserver en position verticale pour éviter l'infiltration de poussières et un enroulement irrégulier.
- Pour enregistrer à partir du début de la bande, faire fonctionner le magnétoscope, pendant 15 secondes environ au début de la bande, avant de lancer l'enregistrement. Cette action évite de manquer le point de départ lors de la lecture sur un magnétoscope.
- Quand le magnétoscope n'est pas en service, en retirer la cassette.

# Lecture





## Lecture d'une cassette

1. **Mettre le téléviseur sous tension et choisir la position de programme réservée au magnétoscope.**
   Si la connexion magnétoscope-téléviseur a été faite via les prises MONITOR OUT EURO-AV ou VIDEO LINE OUT sur le magnétoscope, choisir l'entrée pour le magnétoscope.

2. **Installer une cassette.**
   Le magnétoscope sera mis sous tension.

3. **Appuyer sur la touche ▷.**
   La lecture est lancée.

***Arrêt de la lecture***

Appuyer sur ■.

***Rebobinage de la bande***

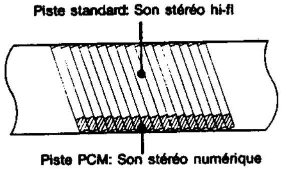
Appuyer sur ◄◄.

***Avance rapide de la bande***

Appuyer sur ►►.

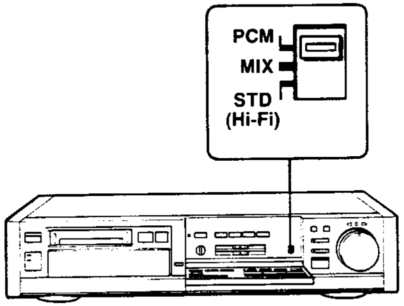
## Sélection du son à surveiller

***Aperçu de l'enregistrement sonore sur une bande vidéo***


Piste standard: Son stéréo hi-fi
Piste PCM: Son stéréo numérique

***Sélection de la piste de lecture***

Choisir la piste que l'on souhaite reproduire en réglant le sélecteur AUDIO MONITOR.



**PCM**
Pour reproduire les signaux stéréo numériques enregistrés sur la piste PCM. Si rien n'a été enregistré sur la piste PCM, la piste stéréo hi-fi sera automatiquement reproduite.

**MIX**
Pour reproduire le son mixé de la piste PCM et de la piste standard.

**STD (HI-FI)**
Pour reproduire le son stéréo Hi-Fi, enregistré sur la piste standard.

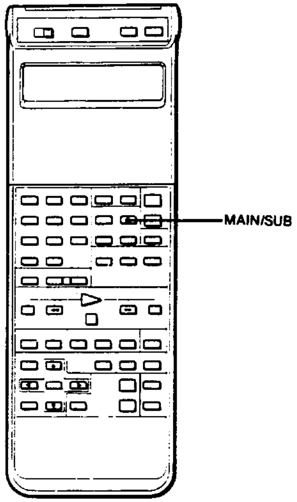
***Sélection du son à reproduire après copie de sons additionnels***

Régler le sélecteur AUDIO MONITOR de la manière suivante.

**PCM**
Pour reproduire le son copié en plus (piste PCM) uniquement.

**MIX**
Pour reproduire le son copié en plus (piste PCM) et le son original (piste standard).

**Remarques**
- Laisser normalement le sélecteur AUDIO MONITOR sur PCM pour obtenir un son de lecture de haute qualité.
- Les sons copiés en plus ne sont pas audibles si le sélecteur AUDIO MONITOR est réglé sur STD (Hi-Fi).



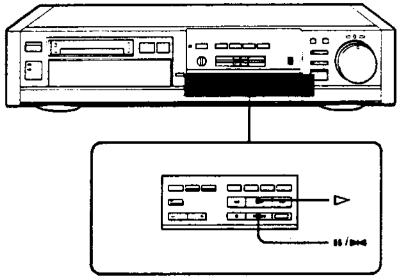
### *Sélection du son à reproduire sur une bande stéréo/bilingue*

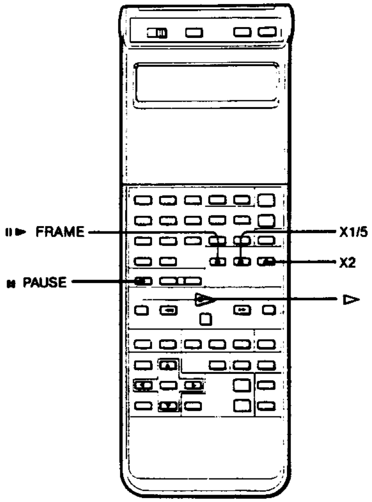
Choisir le son que l'on désire reproduire à l'aide de la touche MAIN/SUB de la télécommande.

| Type de bande | Touche et témoin MAIN/SUB |
|---|---|
| Stéréo | **Chaque poussée fait changer le son reproduit en:**<br>STEREO (son stéréo)<br>↓<br>L (canal gauche)<br>↓<br>R (canal droit) |
| Bilingue | **Chaque poussée fait changer le son reproduit en:**<br>MAIN/ (son principal)<br>↓<br>SUB/ (son auxiliaire)<br>↓<br>MAIN/ SUB/ (son principal/ canal gauche et auxiliaire/canal droit) |

**Si le son est inaudible ou audible de façon intermittente**
Quand est reproduite sur cet appareil une bande enregistrée sur un camescope ou un magnétoscope ne disposant pas de la fonction PCM, régler le sélecteur AUDIO MONITOR sur STD. Il se peut que le témoin PCM clignote, mais ceci n'affectera pas le son.

**Si la connexion est faite sur un téléviseur sans entrées vidéo/audio**
Pour écouter le son reproduit en stéréo, effectuer un branchement sur une chaîne stéréo.





## Les divers modes de lecture

### *Pause de lecture/Image fixe*

Appuyer sur II/▶ ▶◀ du magnétoscope, ou sur II ou II▶ de la télécommande pendant la lecture.
Appuyer sur ▷ pour repasser à la lecture normale.

### *Lecture image par image (Télécommande uniquement)*

Appuyer sur II▶ en mode d'image fixe. Chaque poussée sur la touche II▶ fait avancer l'image d'un cadre. Appuyer sur ▷ pour repasser à la lecture normale.

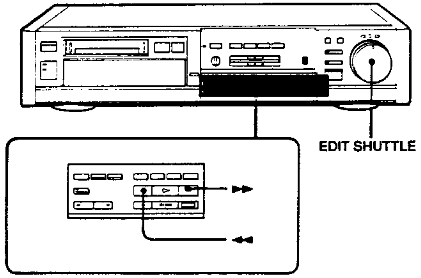
### *Lecture au ralenti*

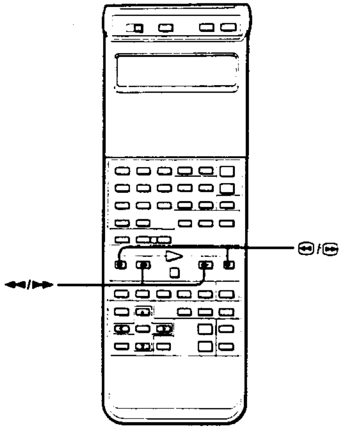
Appuyer sur X 1/5 pour obtenir une lecture à un cinquième de la vitesse normale. Le réglage de vitesse est possible à partir de tout mode de lecture. Appuyer sur ▷ pour repasser à la lecture normale.

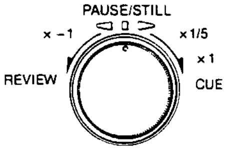
### *Lecture à vitesse double*

Appuyer sur X 2 pour une lecture à vitesse double. Le son reste audible si la position X 2 AUDIO ON a été choisie sur le menu MODE SET (page 31). Par une poussée sur cette touche, le son est automatiquement changé en monaural. Le réglage de vitesse est possible à partir de tout mode de lecture. Appuyer sur ▷ pour repasser à la lecture normale.

**Remarque**
La lecture au ralenti est automatiquement annulée après une minute.







***Recherche d'image***

Appuyer sur ◄◄ ou ►► pendant la lecture. Aussi longtemps que la touche est actionnée, l'exploration des images s'accomplit en marche arrière par la touche ◄◄ et en marche avant par la touche ►►. Relâcher la touche pour repasser au mode de lecture antérieur.

***Recherche continue d'image***

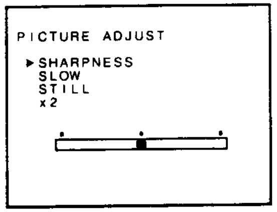
Appuyer sur ⏪ ou ⏩ SEARCH pendant la lecture. L'exploration des images se poursuit en marche arrière ou en marche avant, même après que la touche ⏪ ou ⏩ a été relâchée. Appuyer sur ▷ pour repasser à la lecture normale.

***Recherche visible d'images***

Appuyer sur ►► pendant l'avance rapide ou sur ◄◄ pendant le rebobinage. Les images défilant en mode d'avance rapide ou de rebobinage sont alors visibles pendant que la touche est actionnée.

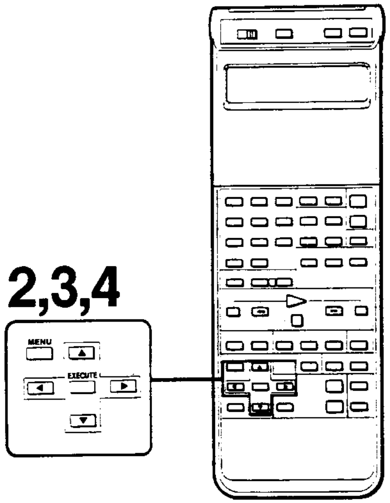
***Utilisation de la bague EDIT SHUTTLE***

Divers modes de lecture peuvent être choisis en maintenant la bague EDIT SHUTTLE à la position illustrée. La tourner dans le sens horaire pour un défilement vers l'avant et dans le sens anti-horaire pour un défilement vers l'arrière. La libération de la bague fournira une image en mode PAUSE/STILL (pause/arrêt sur image). Appuyer sur ▷ pour repasser à la lecture normale.



PICTURE ADJUST

▶SHARPNESS
SLOW
STILL
x2



## Réglages de l'image

Il est possible d'ajuster l'image selon ses préférences en se servant du menu PICTURE ADJUST (ajustement d'image). Appeler le menu PICTURE ADJUST en suivant les démarches ci-après:

**1** **Appuyer sur MENU.**
Le MENU principal apparaît.

**2** **Amener le curseur sur PICTURE ADJUST à l'aide de "▲" ou "▼".**

**3** **Appuyer sur EXECUTE.**
Le menu PICTURE ADJUST apparaît.

**4** **Amener le curseur au paramètre à ajuster en se servant de "▲" ou "▼".**

**5** **Appuyer sur ◄ ou ► pour ajuster l'image.**

**6** **Appuyer sur EXECUTE pour mémoriser le réglage et effacer le menu PICTURE ADJUST.**

### *Détail de chaque paramètre*

**SHARPNESS (netteté)**
Appuyer sur ► pour obtenir une image plus nette ou sur ◄ pour une image plus douce. Ce réglage est possible uniquement en mode de lecture.

**SLOW (ralenti)**
Appuyer sur ◄ ou ► pour éliminer les bandes parasitées qui risquent d'apparaitre à la lecture au ralenti. Ce réglage est possible uniquement en mode de lecture au ralenti.

**STILL (image fixe)**
Appuyer sur ◄ ou ► pour supprimer les vibrations verticales de l'image en mode d'arrêt sur image. Ce réglage est possible uniquement en mode d'arrêt sur image.

**X 2 (vitesse double)**
Appuyer sur ◄ ou ► pour éliminer les bandes parasitées qui risquent d'apparaitre à la lecture à vitesse double. Ce réglage est possible uniquement en mode de lecture à vitesse double.

**Remarque**
La position du curseur changera lors du changement du mode de lecture.

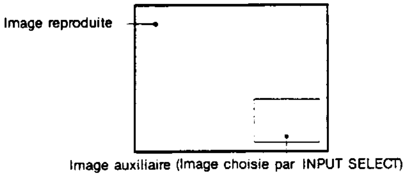
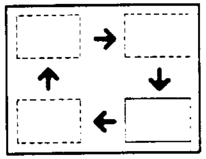


Image reproduite
Image auxiliaire (Image choisie par INPUT SELECT)



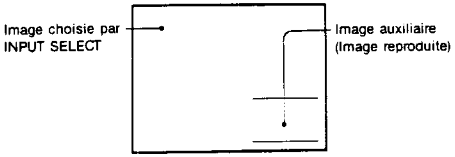
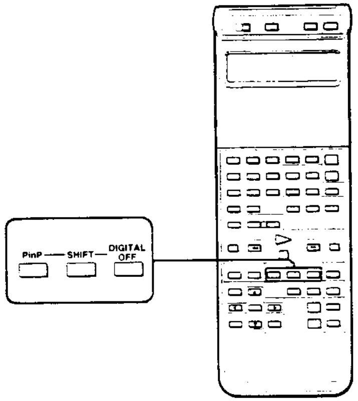


Image choisie par INPUT SELECT
Image auxiliaire (Image reproduite)


PinP
SHIFT
DIGITAL OFF

### Insertion d'une image auxiliaire sur l'image reproduite—P in P

*Appel de l'écran auxiliaire*

**Appuyer sur "P in P" pendant la lecture.**

Quand TUNER est choisi par INPUT SELECT, l'image télévisée peut être vue sur l'écran auxiliaire.

*Déplacement de la position de l'image auxiliaire*

**Appuyer sur SHIFT.**

La position sera déplacée dans l'ordre illustré.

*Inversion de la position de l'image auxiliaire*

**Appuyer à nouveau sur "P in P".**

*Suppression de l'image auxiliaire*

**Appuyer sur DIGITAL OFF.**

La position de l'image auxiliaire sera placée en mémoire.

*Son en mode "P in P" (Image dans l'image)*

Lorsque la connexion magnétoscope-téléviseur est effectuée via les prises MONITOR OUT du magnétoscope:
Le son de l'image principale est audible.

Lorsque la connexion magnétoscope-téléviseur est effectuée via les prises LINE OUT du magnétoscope:
En mode de lecture, le son de l'image reproduite sur ce magnétoscope est audible. Dans les autres modes, le son de la source d'entrée sélectionnée sur ce magnétoscope, est audible.

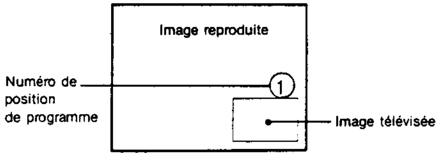
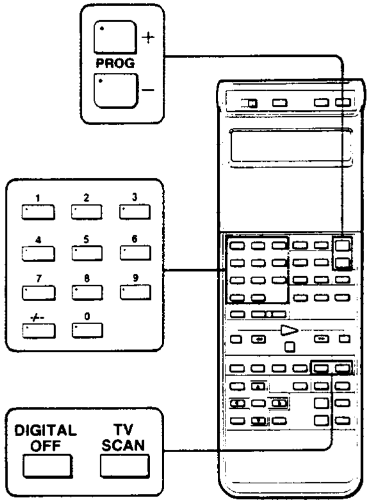


Image reproduite
Numéro de position de programme
①
Image télévisée


+
PROG
–
1
2
3
4
5
6
7
8
9
-/--
0
DIGITAL OFF
TV SCAN

### Vision des canaux télévisés en succession—Exploration des programmes télévisés

Pendant la lecture d'une bande, il est possible de regarder, pendant quelques secondes et dans un ordre préréglé, chacun des programmes télévisés.

*Marche à suivre*

**Appuyer sur TV SCAN pendant la lecture.**

Un programme télévisé sera affiché sur l'écran auxiliaire pendant quelques secondes avec le numéro de position de programme. Une fois que toutes les stations préréglées ont été affichées, la première position de programme apparaît à nouveau.

*Obtention de la position de programme souhaitée sur l'écran auxiliaire*

**Appuyer sur le numéro de position de programme ou sur la touche PROG (PROGRAM) +/–.**

*Annulation de l'image auxiliaire*

Une fois que l'exploration des programmes télévisés est achevée, appuyer sur DIGITAL OFF. Pendant l'exploration, entrer directement la position de programme de l'émission souhaitée par les touches numériques de position de la télécommande ou les touches PROG (PROGRAM) +/–.

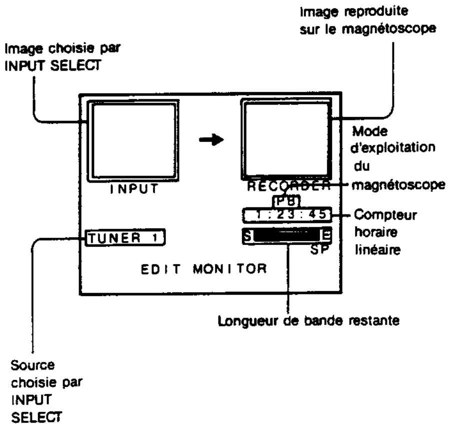
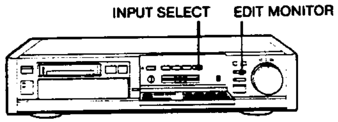
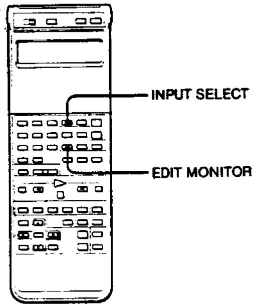


Image choisie par INPUT SELECT
Image reproduite sur le magnétoscope
INPUT
RECORDER
PB
1 : 23 : 45
TUNER 1
S
E
SP
EDIT MONITOR
Mode d'exploitation du magnétoscope
Compteur horaire linéaire
Longueur de bande restante
Source choisie par INPUT SELECT

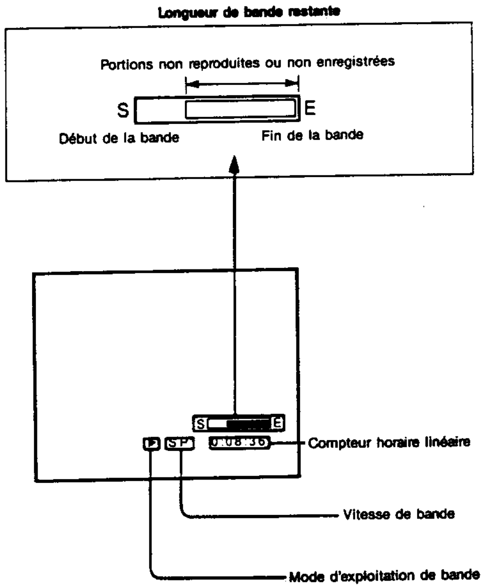

INPUT SELECT
EDIT MONITOR

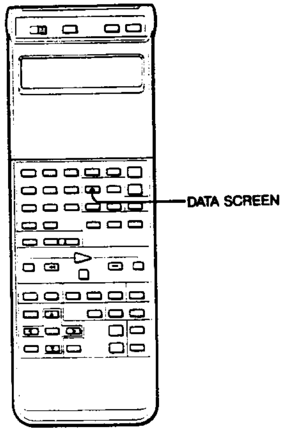

INPUT SELECT
EDIT MONITOR

## Vision simultanée de deux images—EDIT MONITOR

Appuyer sur EDIT MONITOR sur la télécommande ou sur le magnétoscope. L'image reproduite de ce magnétoscope et l'image choisie par le sélecteur INPUT SELECT peuvent être vues simultanément sur l'écran de surveillance de montage (EDIT MONITOR).

Consulter la section "Montage" pour les utilisations pratiques de l'écran de "Surveillance de montage" pendant le montage.


Longueur de bande restante
Portions non reproduites ou non enregistrées
S
E
Début de la bande
Fin de la bande
S
E
P
SP
0:08:36
Compteur horaire linéaire
Vitesse de bande
Mode d'exploitation de bande


DATA SCREEN

## Ecran de données

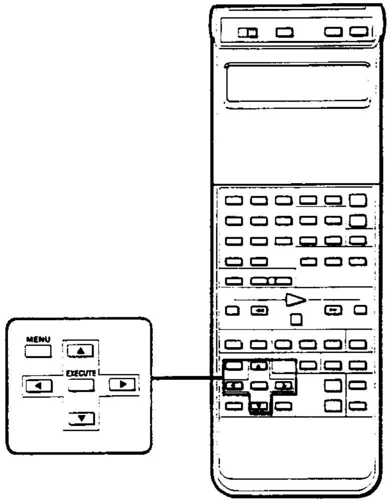
Les informations, indiquées ci-contre, apparaissent automatiquement à titre de référence sur l'écran au cours de la lecture ou de l'enregistrement. Noter, toutefois, que l'écran de données n'apparaît pas quand la connexion magnétoscope—téléviseur est effectuée via la prise VIDEO LINE OUT de cet appareil.

***Effacement ou affichage de l'écran de données***

Appuyer sur la touche DATA SCREEN de la télécommande.

**Remarque sur l'indicateur de longueur de bande restante**
Cet indicateur montre approximativement quelle longueur reste encore sur la bande.

```
AUTO MENU

▶PLAY-REW-POWER OFF
 GO TO ZERO-STOP
 GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
 REW-TIMER REC
```



### Désignation du mode d'exploitation souhaité

En se guidant sur le menu automatique (AUTO MENU), il est possible de faire passer automatiquement le magnétoscope par la séquence d'exploitation souhaitée.

1 **Appuyer sur MENU.**
Le MENU principal apparaît.

2 **Amener le curseur sur AUTO MENU à l'aide de la touche "▲" ou "▼".**

3 **Appuyer sur EXECUTE.**
Le menu AUTO MENU apparaît.

4 **Par la touche "▲" ou "▼", amener le curseur à la séquence d'exploitation souhaitée.**

5 **Appuyer sur EXECUTE.**
L'opération choisie commence.
Cette opération est affichée sur l'écran pendant quelques secondes.

### Modes du menu automatique

**PLAY — REW — POWER OFF:** Cette séquence reproduit la bande, la rebobine quand elle arrive à son extrémité et coupe l'alimentation électrique.

**GO TO ZERO — STOP:** Cette séquence recherche le point zéro du compteur et arrête la bande. Voir page 64.

**GO TO ZERO — PLAY:** Cette séquence recherche le point zéro du compteur et y lance la lecture. Voir page 65.

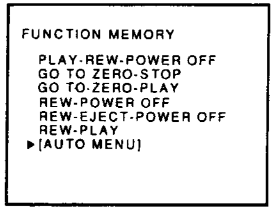
**REW — POWER OFF:** Cette séquence rebobine la bande jusqu'à son début et coupe l'alimentation électrique.

**REW — EJECT — POWER OFF:** Cette séquence rebobine la bande jusqu'à son début, éjecte la cassette et coupe l'alimentation électrique.

**REW — PLAY:** Cette séquence rebobine la bande jusqu'à son début et y lance la lecture.

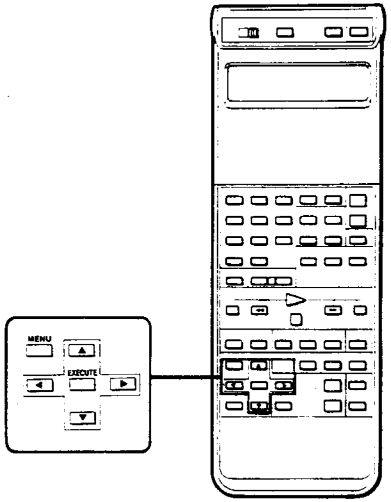
**REW — TIMER REC:** Cette séquence rebobine la bande jusqu'à son début et passe en mode d'attente à enregistrement par minuterie. Une cassette, dont la languette rouge est visible, sera éjectée.

**Remarque sur la séquence REW — TIMER REC**
Si le magnétoscope se trouve en mode d'attente à l'enregistrement par minuterie, appuyer d'abord sur TIMER REC (ON/OFF) pour annuler le mode d'attente, puis mettre l'appareil sous tension et appeler le menu AUTO MENU en consultant les démarches de la page 46.



FUNCTION MEMORY

PLAY-REW-POWER OFF
GO TO ZERO-STOP
GO TO-ZERO-PLAY
REW-POWER OFF
REW-EJECT-POWER OFF
REW-PLAY
▶[AUTO MENU]



### Attribution d'un mode de menu automatique à la touche FUNCTION MEMORY

Un des modes du menu AUTO MENU peut être attribué à la touche FUNCTION MEMORY de la télécommande.

1 **Appuyer sur MENU.**
Le MENU principal apparaît.

2 **Par la touche "▲" ou "▼", amener le curseur à FUNCTION MEMORY.**

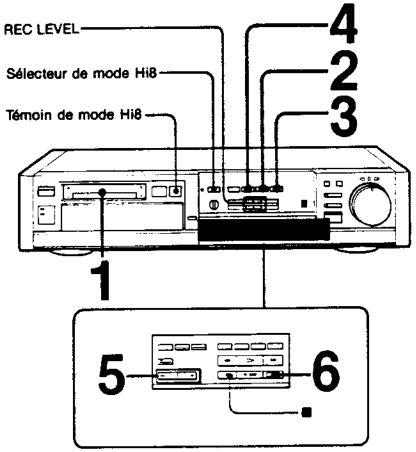
3 **Appuyer sur EXECUTE.**
Le menu FUNCTION MEMORY (mémorisation de fonction) apparaît.

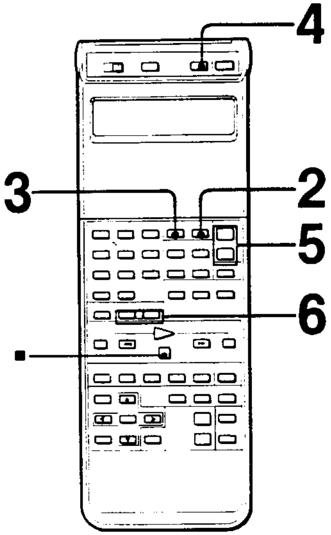
4 **Amener le curseur à la séquence d'exploitation souhaitée.**

5 **Appuyer sur EXECUTE.**
L'opération choisie est alors attribuée à la touche FUNCTION MEMORY. Chaque fois que celle-ci sera actionnée en mode d'arrêt, l'opération choisie sera exécutée.

Si "AUTO MENU" est choisi à l'étape 4, le menu "AUTO MENU" sera immédiatement affiché quand la touche FUNCTION MEMORY sera actionnée, ce qui donnera un accès direct au menu AUTO MENU.

## Enregistrement d'un programme télévisé





### Avant de commencer

- Confirmer que toutes les connexions ont été bien faites.
- Mettre le téléviseur sous tension et choisir l'entrée vidéo sur le téléviseur ou choisir la position de programme pour le magnétoscope.
- A l'emploi d'une cassette Hi8, vérifier le témoin Hi8. L'allumer en mode Hi8, mais l'éteindre pour enregistrer en mode 8 mm standard.
- Ajuster les réglages REC LEVEL au niveau adéquat (voir page 53).
- Les indications de l'écran de données ne seront pas enregistrées.

### Marche à suivre

1 **Installer une cassette.**
L'appareil est automatiquement mis sous tension.

2 **Par le sélecteur REC MODE, choisir la vitesse d'enregistrement: SP ou LP.**

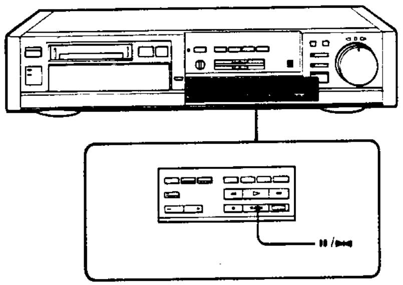
3 **Appuyer sur INPUT SELECT de sorte que le témoin TUNER apparaisse sur le panneau d'affichage.**

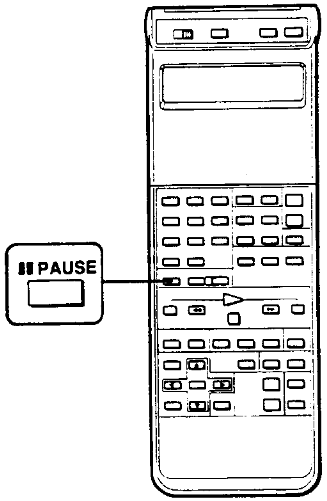
4 **Appuyer sur TV/VTR de sorte que le témoin VTR apparaisse sur le panneau d'affichage (seulement quand la connexion téléviseur - magnétoscope a été effectuée via la prise AERIAL OUT sur le magnétoscope.)**

5 **A l'aide de PROG (PROGAM) +/−, choisir la position de programme à enregistrer.**

6 **Appuyer sur la touche adéquate tout en appuyant sur la touche ● REC de la télécommande, ou appuyer sur la touche ● REC de l'appareil.**
L'enregistrement est alors lancé.

***Arrêt de l'enregistrement***
Appuyer sur ■ (STOP).





## Coupure de scènes par enregistrement superposé

***Aperçu***

En se servant du mode de pause à l'enregistrement, on pourra éviter d'enregistrer des scènes inutiles lorsqu'elles apparaissent et reprendre ensuite l'enregistrement en douceur. En outre, en utilisant les touches SHUTTLE EDIT de la télécommande ou la bague EDIT SHUTTLE du magnétoscope, on pourra éliminer les scènes superflues en rebobinant et/ou en avançant la bande. On passera alors au mode de pause à l'enregistrement et on pourra poursuivre l'enregistrement en douceur.

***Marche à suivre***

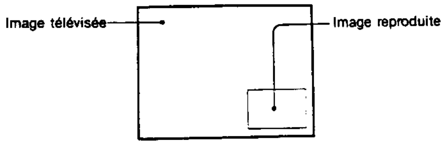
---

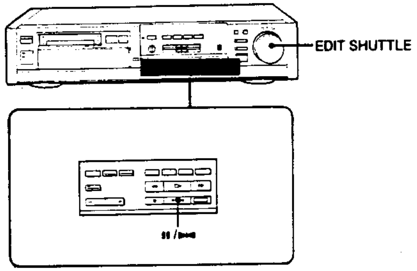
**Démarches de base**

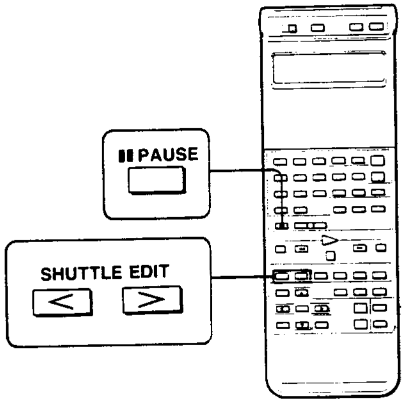
**1** **Au cours de l'enregistrement, appuyer sur II PAUSE de la télécommande ou sur II/▶◀ PAUSE/STILL du magnétoscope.**
Le magnétoscope se place en mode de pause à l'enregistrement.

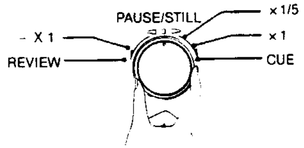
**2** **Appuyer sur II PAUSE au point souhaité pour continuer l'enregistrement.**

**Remarque**
Pour la protection de la bande et des têtes vidéo, le mode pause est automatiquement annulé après 7 minutes environ et le magnétoscope se place alors en mode d'arrêt.









---

**Démarches évoluées**

**1** **Au cours de l'enregistrement d'une émission télévisée, appuyer sur II PAUSE de la télécommande ou sur II/▶◀ PAUSE/STILL du magnétoscope.**
Le magnétoscope se place en mode de pause à l'enregistrement.

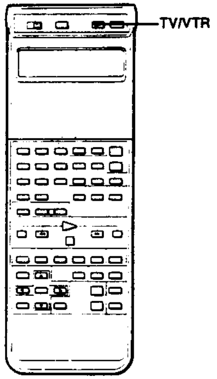
**2** **Rebobiner la bande par SHUTTLE EDIT < ou > de la télécommande ou EDIT SHUTTLE du magnétoscope de manière à localiser le point où doit se poursuivre l'enregistrement.**
Un écran "P in P" (image dans l'image) apparaît et il est possible de visionner l'image reproduite sur l'écran auxiliaire.

**Emploi de SHUTTLE EDIT < ou >:**
Appuyer sur < pour faire revenir l'image (x 1 la vitesse).
Appuyer sur > pour faire avancer l'image (x 1 la vitesse).

**Emploi de EDIT SHUTTLE:**
Tourner vers la gauche pour la recherche en arrière.
Tourner vers la droite pour la recherche en avant.
La vitesse de lecture est celle qui est indiquée sur l'illustration.

**3** **Relâcher la touche SHUTTLE EDIT ou la bague EDIT SHUTTLE au point désiré.**
L'écran auxiliaire disparaît et le magnétoscope se place en mode de pause à l'enregistrement après 2 secondes environ.

**4** **Appuyer sur II PAUSE de la télécommande ou sur II/▶◀ PAUSE/STILL du magnétoscope quand on désire poursuivre l'enregistrement.**

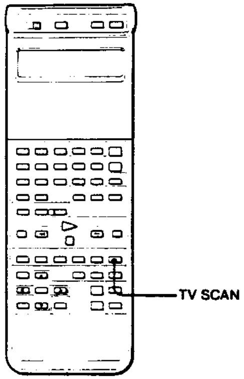


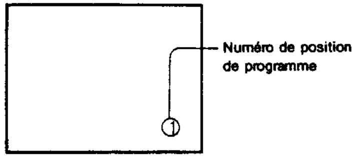
### Vision d'une émission télévisée pendant un enregistrement

***Si la connexion magnétoscope-téléviseur a été faite via MONITOR OUT EURO-AV***
**Appuyer sur TV/VTR pour éteindre le témoin VTR.**
Le programme choisi sur le téléviseur apparaît sur l'écran.

***Si la connexion magnétoscope-téléviseur a été faite via les prises LINE OUT VIDEO/S VIDEO/AUDIO ou MONITOR OUT S VIDEO***
**Appuyer sur TV/VTR pour éteindre le témoin VTR. Choisir l'entrée tuner sur le téléviseur et changer la position de programme sur le téléviseur.**

***Si la connexion magnétoscope-téléviseur a été faite via les prises AERIAL***
**Appuyer sur TV/VTR pour éteindre le témoin VTR et changer la position de programme sur le téléviseur en se servant des touches de numéro de position de programme.**

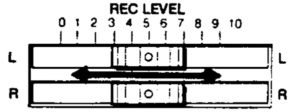


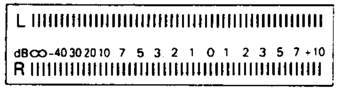


### Exploration des programmes télévisés

En regardant les programmes télévisés, appuyer sur TV SCAN et l'on pourra visionner pendant quelques secondes chacun des programmes télévisés dans l'ordre préréglé en mémoire.

## Réglage du niveau d'enregistrement





Ajuster les réglages REC LEVEL pour obtenir le niveau audio approprié en observant l'indicateur de crête sur le panneau d'affichage.

### Niveau d'enregistrement adéquat

***Enregistrement d'une source à signaux de fréquence moyenne et basse (p.ex. des voix)***
Ajuster de façon que l'élément au niveau 0 dB s'allume en présence du niveau de signal le plus haut.

***Enregistrement d'une source à signaux de fréquence moyenne et haute (p.ex. trompette, son aigu de violons)***
Ajuster de façon que l'élément au niveau −1 à −3 dB s'allume en présence du niveau le plus haut.

**Remarques**
- Pendant la lecture, l'indicateur de crête de programme affiche la crête du son enregistré.
- Après l'enregistrement, il est conseillé de ramener les réglages REC LEVEL à leur niveau minimum pour la lecture. Ces commandes n'affectent pas le volume pendant la lecture, mais des parasites risquent d'apparaître quand la lecture est arrêtée, ce qui pourrait endommager les haut-parleurs s'ils sont raccordés.

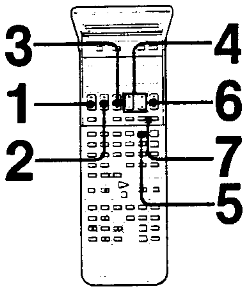
# Enregistrement déclenché par minuterie

## Enregistrement par minuterie sur ce magnétoscope

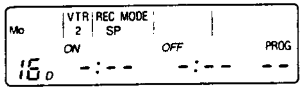
Un maximum de six programmes peuvent être préréglés sur cet appareil jusqu'à un mois à l'avance.

## Avant de commencer

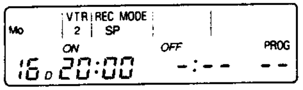
- Mettre le téléviseur sous tension et l'ajuster pour recevoir l'image du magnétoscope.
- Confirmer que les horloges de la télécommande et du magnétoscope coïncident et indiquent l'heure actuelle.



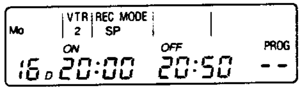
1


Mo
VTR 2
REC MODE SP
ON
OFF
PROG
16 D
-:--
-:--
--

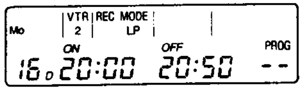
2,3


Mo
VTR 2
REC MODE SP
ON
OFF
PROG
16 D
20:00
-:--
--

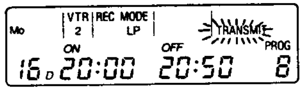
4


Mo
VTR 2
REC MODE SP
ON
OFF
PROG
16 D
20:00
20:50
--

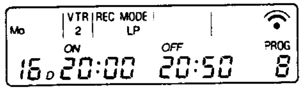
5


Mo
VTR 2
REC MODE LP
ON
OFF
PROG
16 D
20:00
20:50
--

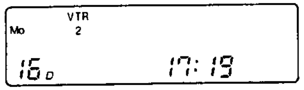
6


Mo
VTR 2
REC MODE LP
TRANSMIT
ON
OFF
PROG
16 D
20:00
20:50
8

7


Mo
VTR 2
REC MODE LP
ON
OFF
PROG
16 D
20:00
20:50
8

8


Mo
VTR
2
16 D
17:19

## Marche à suivre

**Exemple:** Pour enregistrer l'émission de 20:00 à 20:50 le lundi 16 juillet 1990 à la position de programme 8 en mode SP.

1 **Ouvrir le couvercle de la télécommande et appuyer sur D jusqu'à apparition de 16.**
Le jour de la semaine "MO" (lundi) est ajusté automatiquement.

2 **Poser l'heure de mise en marche de l'enregistrement par TURN ON H.**

3 **Poser la minute de mise en marche de l'enregistrement par TURN ON M.**

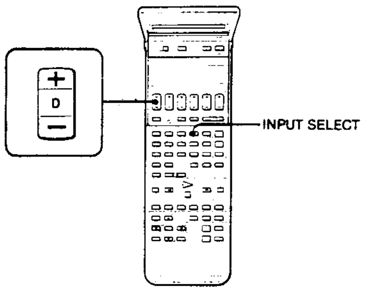
4 **Poser l'heure et la minute de la fin de l'enregistrement par TURN OFF H et M.**

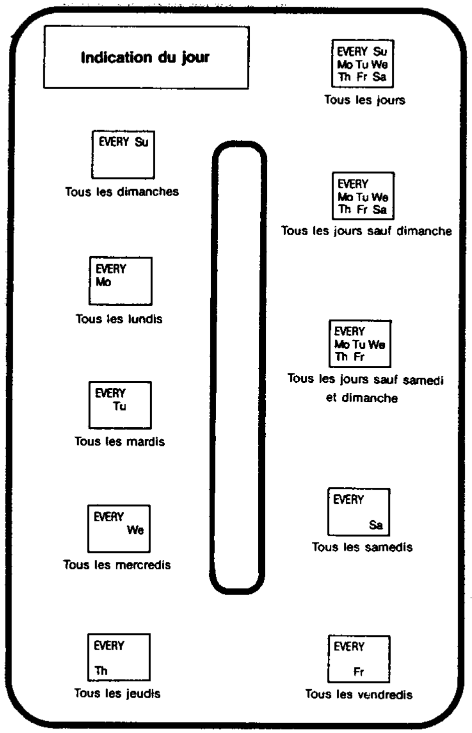
5 **Choisir le mode d'enregistrement, SP ou LP, par la touche REC MODE.**

6 **Choisir la position de programme par la touche PROG.**
Le témoin TRANSMIT clignote pour signaler que tous les paramètres ont été entrés.

7 **Diriger la télécommande vers le magnétoscope et appuyer sur TRANSMIT.**
Avec un "bip", le magnétoscope se place en mode d'attente à l'enregistrement. La liste de programmation (PROGRAM LIST) apparaît sur l'écran pendant quelques secondes.

8 **Refermer le couvercle de la télécommande de manière que l'heure actuelle apparaisse sur son affichage à cristaux liquides.**
Au moment programmé, le magnétoscope se met sous tension, il commence l'enregistrement et il se met hors tension lorsqu'il est terminé.


D
INPUT SELECT


Indication du jour
EVERY Su
Tous les dimanches
EVERY Mo
Tous les lundis
EVERY Tu
Tous les mardis
EVERY We
Tous les mercredis
EVERY Th
Tous les jeudis
EVERY Su Mo Tu We Th Fr Sa
Tous les jours
EVERY Mo Tu We Th Fr Sa
Tous les jours sauf dimanche
EVERY Mo Tu We Th Fr
Tous les jours sauf samedi et dimanche
EVERY Sa
Tous les samedis
EVERY Fr
Tous les vendredis

### Préréglage d'autres programmes

Effectuer les démarches de 1 à 6 avant l'étape 7.

### Enregistrement depuis l'appareil raccordé aux prises LINE IN VIDEO/AUDIO/S VIDEO 1 ou 2

Appuyer sur INPUT SELECT à l'étape 5 pour changer l'indication de PROG—à LINE L1 ou LINE L2.

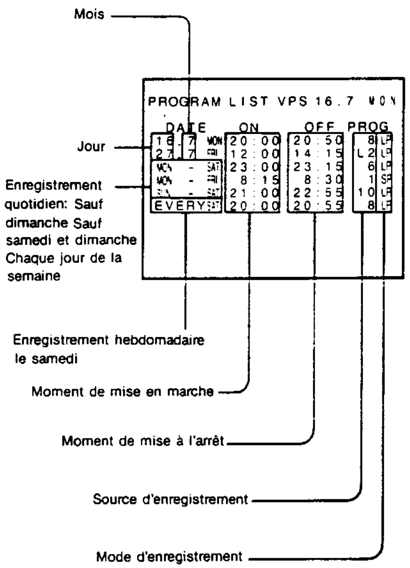
### Enregistrement quotidien/hebdomadaire

Ce magnétoscope peut être préréglé pour enregistrer le même programme chaque jour de la semaine (enregistrement quotidien) ou le même programme un jour donné de chaque semaine (enregistrement hebdomadaire).

Au lieu de l'étape 1 sous "Marche à suivre", appuyer sur D — de la télécommande pour changer l'affichage dans l'ordre indiqué sur l'illustration. Quand le mode d'enregistrement souhaité est posé et transmis au magnétoscope, le témoin correspondant s'allume sur le panneau d'affichage.

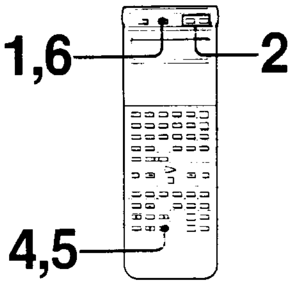
**Si une brève tonalité répétée est audible quand TRANSMIT est actionnée**
Une brève tonalité indique que les instructions ne sont pas reçues par le magnétoscope. Appuyer sur TRANSMIT une nouvelle fois avant de refermer le couvercle, puis vérifier les points suivants.

- Un réglage illogique a été effectué.
- Le préréglage de la minuterie est possible seulement quand le magnétoscope est éteint ou arrêté ou en mode d'enregistrement par minuterie.
- Six préréglages de minuterie ont déjà été mémorisés.
- La bande est à son extrémité.


PROGRAM LIST VPS 16.7 MON

| DATE | ON | OFF | PROG | |
|---|---|---|---|---|
| 16.7 MON | 20:00 | 20:50 | 8 | LP |
| 27.7 FRI | 12:00 | 14:15 | L 2 | LP |
| MON - SAT | 23:00 | 23:15 | 6 | LP |
| MON - FRI | 8:15 | 8:30 | 1 | SP |
| SUN - SAT | 21:00 | 22:55 | 10 | LP |
| EVERY SAT | 20:00 | 20:55 | 8 | LP |

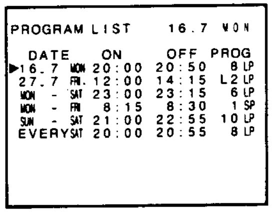
Mois
Jour
Enregistrement quotidien: Sauf dimanche Sauf samedi et dimanche Chaque jour de la semaine
Enregistrement hebdomadaire le samedi
Moment de mise en marche
Moment de mise à l'arrêt
Source d'enregistrement
Mode d'enregistrement



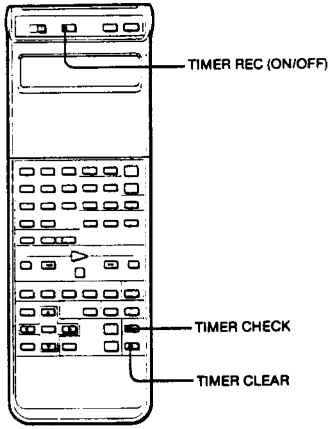
### Vérification des préréglages de la minuterie

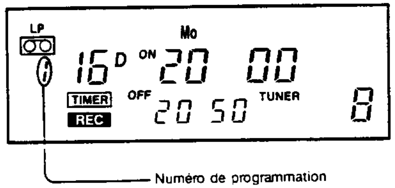
Il est possible de vérifier les préréglages en affichant la liste de programmation (PROGRAM LIST) sur l'écran. Si le magnétoscope est sous tension, appuyer simplement sur TIMER ON SCREEN. S'il se trouve en mode d'attente à l'enregistrement par minuterie, procéder comme expliqué ci-après.

1. **Appuyer sur TIMER REC (ON/OFF) pour éteindre le témoin TIMER REC sur le panneau d'affichage.**
2. **Mettre le magnétoscope sous tension et appuyer sur le sélecteur TV/VTR pour allumer le témoin VTR.**
3. **Mettre le téléviseur sous tension.**
   Régler à la position de programme pour la lecture du magnétoscope si la connexion magnétoscope - téléviseur a été effectuée via la prise AERIAL OUT du magnétoscope. Choisir l'entrée VTR sur le téléviseur si la connexion magnétoscope - téléviseur est faite via les prises MONITOR OUT EURO-AV/S VIDEO ou LINE OUT VIDEO/AUDIO/S VIDEO.
4. **Appuyer sur TIMER ON SCREEN.**
   L'affichage PROGRAM LIST apparaît sur l'écran.
5. **Appuyer à nouveau sur TIMER ON SCREEN pour repasser à l'affichage original.**
6. **Appuyer sur TIMER REC (ON/OFF) pour repasser en mode d'attente à l'enregistrement par minuterie.**



```
PROGRAM LIST       16.7 MON

  DATE      ON       OFF  PROG
▶16.7 MON 20:00   20:50    8 LP
 27.7 FRI.12:00   14:15   L2 LP
 MON - SAT 23:00  23:15    6 LP
 MON - FRI  8:15   8:30    1 SP
 SUN - SAT 21:00  22:55   10 LP
 EVERY SAT 20:00  20:55    8 LP
```





## Annulation/Modification d'un réglage de minuterie

### *En consultant la PROGRAM LIST*

1 **Afficher la liste PROGRAM LIST en se reportant aux étapes de 1 à 4 sous "Vérification des préréglages de la minuterie".**

2 **Appuyer sur TIMER CHECK pour appeler le curseur sur l'écran et amener celui-ci au paramètre qu'il y a lieu de corriger ou d'annuler.**

3 **Pour annuler le paramètre en question, appuyer sur TIMER CLEAR.**
S'il y a d'autres préréglages sur l'affichage PROGRAM LIST, appuyer sur TIMER REC ON/OFF pour repasser au mode d'attente à l'enregistrement par minuterie.

**Pour corriger un paramètre, ré-entrer tous les préréglages sur la télécommande. Voir les étapes 1 à 7 sous "Enregistrement déclenché par minuterie — Marche à suivre".**
Dans ce cas, le magnétoscope se place automatiquement en mode d'attente à l'enregistrement par minuterie.

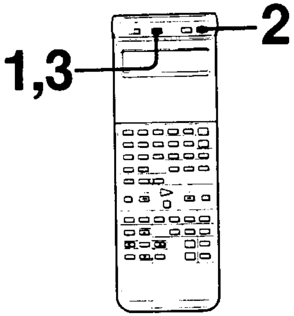
### *Effacement d'un paramètre sans consultation de la PROGRAM LIST*

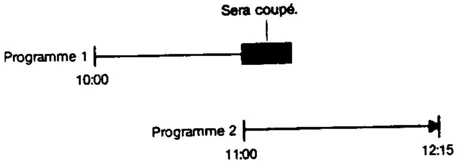
1 **Appuyer sur TIMER REC (ON/OFF).**

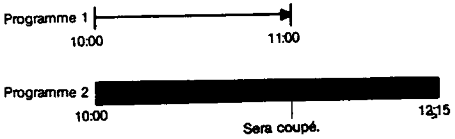
2 **Appuyer de façon répétée sur TIMER CHECK jusqu'à apparition du programme souhaité.**

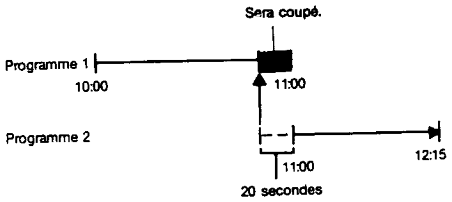
3 **Appuyer sur TIMER CLEAR.**

4 **Appuyer sur TIMER REC (ON/OFF) pour repasser au mode d'attente d'enregistrement par minuterie si d'autres programmations ont été faites en prévision de l'enregistrement par minuterie.**









## Utilisation du magnétoscope pendant le mode d'attente d'enregistrement par minuterie

1 **Appuyer sur TIMER REC (ON/OFF) pour éteindre le témoin TIMER REC.**

2 **Mettre le magnétoscope sous tension.**
Le magnétoscope peut alors être utilisé.

3 **Après utilisation du magnétoscope, appuyer sur TIMER REC (ON/OFF) et rallumer le témoin TIMER REC pour repasser en mode d'attente en vue de l'enregistrement programmé sur la minuterie.**

## En cas de chevauchement des préréglages de la minuterie

### *Si le préréglage de deux programmes chevauche*

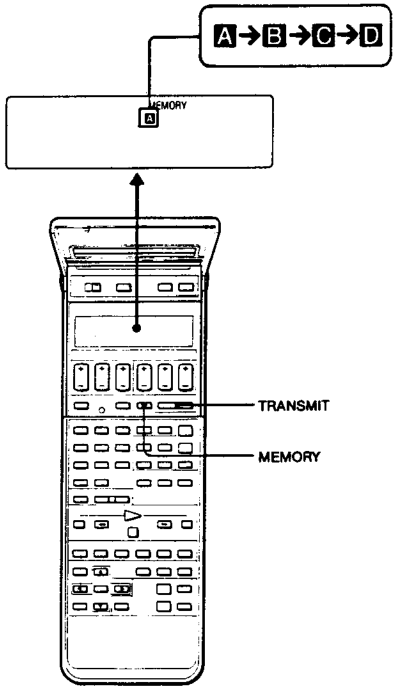
L'enregistrement du programme suivant commencera automatiquement avant que ne s'achève le premier.

### *Si le moment de mise en marche de deux programmes coïncide*

Le magnétoscope enregistrera l'émission ayant le plus petit numéro de programmation ou placée en premier sur la liste de programmation. L'émission ayant un numéro plus grand ou placée plus loin sur la liste sera effacée de celle-ci.

### *Si le moment d'arrêt d'enregistrement du programme 1 et celui de mise en marche d'enregistrement du programme 2 coïncident*

Les 20 dernières secondes du programme 1 ne seront pas enregistrées car le magnétoscope se placera en mode de pause à l'enregistrement pour le programme 2 avant la fin du programme 1.



## Mémorisation par la télécommande des postes souvent utilisés

Les postes, définis pour un programmme d'enregistrement par minuterie, sont effacés de l'affichage par cristaux liquides dès qu'est refermé le couvercle de la télécommande. De même, ils sont éliminés de la mémoire une fois que l'enregistrement a été effectué. Toutefois, il est possible de mémoriser les moments de mise en marche/arrêt et la position de programme pour un maximum de quatre programmations et de les rappeler par la suite. Ceci permet d'avoir facilement accès aux postes souvent utilisés, notamment pour ses feuilletons hebdomadaires favoris. La date d'enregistrement sera automatiquement changée à la semaine suivante après que l'enregistrement est achevé.

### *Marche à suivre*

**Exemple:** Pour mémoriser les données d'enregistrement par minuterie dans MEMORY A.

1 **Appuyer sur MEMORY pour spécifier MEMORY A.**

2 **Poser tous les postes pour l'enregistrement par minuterie en se référant à "Enregistrement par minuterie-Marche à suivre".**

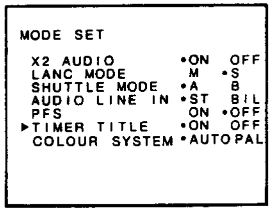
3 **Appuyer sur MEMORY pour changer l'indication en B, C ou D et répéter l'étape 2 pour les autres programmes.**
Les postes ainsi définis resteront en mémoire, même si le couvercle de la télécommande est refermé.

### *Rappel et changement des postes*

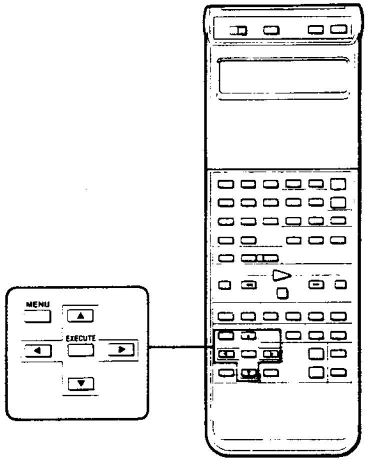
1 **Appuyer sur MEMORY pour appeler l'indication souhaitée de la mémoire (A, B, C ou D).**

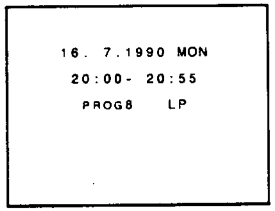
2 **Effectuer les modifications adéquates.**

3 **Appuyer sur TRANSMIT.**
Le magnétoscope se place en mode d'attente à l'enregistrement par minuterie.



```
MODE SET

 X2 AUDIO          •ON   OFF
 LANC MODE          M   •S
 SHUTTLE MODE      •A    B
 AUDIO LINE IN     •ST   BIL
 PFS                ON  •OFF
▶TIMER TITLE       •ON   OFF
 COLOUR SYSTEM     •AUTO PAL
```





```
16. 7.1990 MON
20:00- 20:55
PROG8     LP
```

## Enregistrement d'un titre de minuterie

Un "écran de titre", comportant l'heure du début/fin de l'enregistrement, sa date et la position de programme, peut être enregistré pendant 3 secondes sur la bande avant le début de l'enregistrement déclenché par minuterie. Ce "titre" s'avèrera pratique pour localiser le début d'un programme donné lorsque plusieurs ont été enregistrés successivement sur une même bande. L'enregistrement du titre peut être effectué ou non, en procédant comme suit.

1 **Avant de régler la minuterie, appuyer sur MENU.**
Le MENU principal apparaît.

2 **Par la touche "▲" ou "▼", amener le curseur sur MODE SET.**

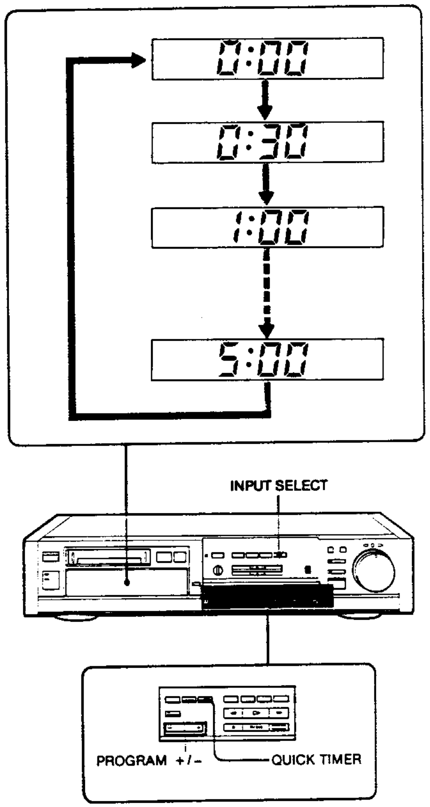
3 **Appuyer sur EXECUTE.**
Le menu MODE SET apparaît.

4 **Par la touche "▲" ou "▼", amener le curseur sur TIMER TITLE.**

5 **Appuyer sur ◀ ou ▶ pour choisir ON afin d'enregistrer le titre de minuterie, ou OFF pour enregistrer sans titre.**

6 **Appuyer sur EXECUTE pour mémoriser le réglage.**
Si ON a été choisi à l'étape 5, le titre de minuterie sera automatiquement enregistré avant le début de l'enregitrement, déclenché par la minuterie.

# Enregistrement instantané par minuterie



## Qu'est-ce qu'un enregistrement instantané par minuterie?

Grâce à cette fonction, il est possible d'effectuer rapidement un enregistrement car la minuterie peut être programmée jusqu'à une durée de 5 heures par tranche de 30 minutes.

## Marche à suivre

Si un enregistrement est en cours, ignorer les étapes de 1 à 3.

1 **Appuyer sur INPUT SELECT de manière à allumer le témoin TUNER.**

2 **Installer une cassette.**

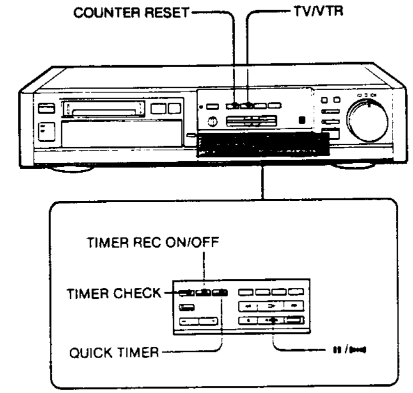
3 **Appuyer sur QUICK TIMER.**
Le témoin TIMER s'allume sur le panneau d'affichage.

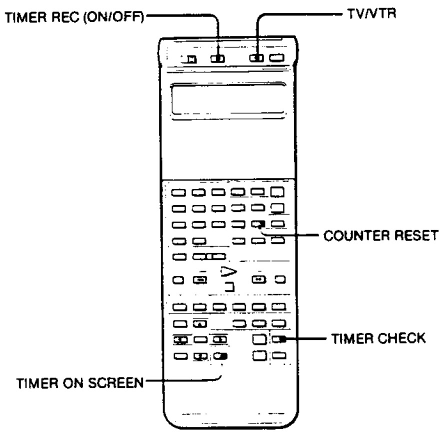
4 **Choisir la position de programme souhaitée par PROG (PROGRAM) +/– tandis que, sur l'affichage, clignotent 0:00 et le numéro de position de programme.**

5 **Appuyer à nouveau sur QUICK TIMER pour lancer l'enregistrement.**

6 **Appuyer à nouveau sur QUICK TIMER pour poser la durée de l'enregistrement.**
Appuyer dans les 30 secondes à compter de l'étape 3; faute de quoi, l'alimentation électrique sera coupée. Chaque poussée sur QUICK TIMER fait changer l'indication du panneau d'affichage par tranche de 30 minutes.

7 **La durée d'enregistrement est décomptée minute par minute jusqu'à 0:00, moment où le magnétoscope est automatiquement mis hors tension.**





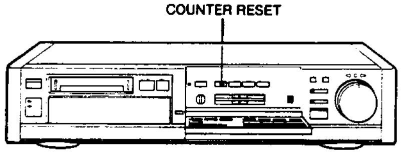
***Touches utilisables pendant l'enregistrement instantané par minuterie***

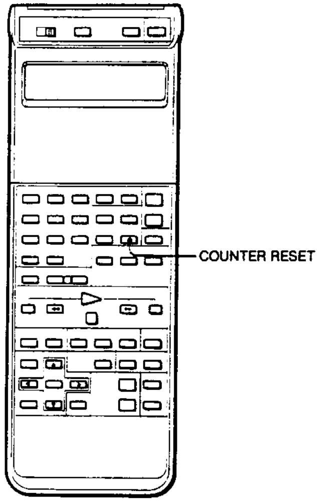
- •II/►◄ arrête temporairement l'enregistement instantané.
- •**TIMER REC ON/OFF** arrête l'enregistrement instantané par minuterie.
- •**QUICK TIMER** change la durée d'enregistrement.
- •**TIMER ON SCREEN** affiche la liste PROGRAM LIST.
- •**TIMER CHECK** déplace le curseur sur la PROGRAM LIST ou change le numéro de programmation sur le panneau d'affichage.
- •**COUNTER RESET** ramène le compteur à zéro.
- •**TV/VTR** change l'écran à un autre programme, reçu sur le téléviseur.

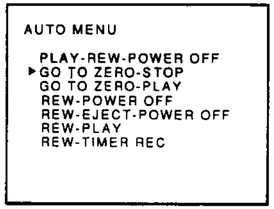
**Si une interruption de courant se produit pendant l'enregistrement instantané par minuterie**
L'enregistrement s'arrête et le magnétoscope est mis hors service. Si l'interruption dure moins d'une heure et si le courant est rétabli pendant la durée prévue pour l'enregistrement interrompu, il se poursuivra à partir de cet instant.

**Si l'appareil se trouve en mode d'attente à l'enregistrement par minuterie**
Appuyer sur TIMER REC ON/OFF pour éteindre le témoin TIMER REC, puis appuyer sur QUICK TIMER.

# Utilisation du compteur de bande






```
AUTO MENU

 PLAY-REW-POWER OFF
▸GO TO ZERO-STOP
 GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
 REW-TIMER REC
```

## Compréhension de la position zéro du compteur

Le compteur de bande de ce magnétoscope servira de référence pour localiser une scène donnée après l'enregistrement ou pendant la lecture. Appuyer sur COUNTER RESET pour ramener le compteur à "0H00M00S" (position zéro du compteur) avant la mise en service. Le magnétoscope affichera la longueur de la bande pendant son enregistrement ou sa lecture.

## Retour à zéro

Le magnétoscope peut retrouver la position zéro du compteur et s'y arrêter. Cette fonction s'avère pratique pour localiser une scène particulière après l'enregistrement ou la lecture.

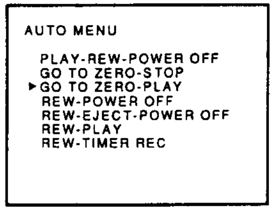
1 **Appuyer sur COUNTER RESET au point souhaité pendant l'enregistrement ou la lecture.**

2 **Appuyer sur ■ pour arrêter la bande après l'enregistrement ou la lecture.**

3 **Appuyer sur MENU et choisir AUTO MENU.** Pour l'utilisation, voir sous "Désignation du mode d'exploitation souhaité" (page 46).

4 **Amener le curseur sur "GO TO ZERO — STOP".**

5 **Appuyer sur EXECUTE.**


```
AUTO MENU

 PLAY-REW-POWER OFF
 GO TO ZERO-STOP
▸GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
 REW-TIMER REC
```

## Lecture après retour à zéro

Le magnétoscope peut rechercher la position zéro du compteur et y commencer la lecture après l'enregistrement ou la lecture.

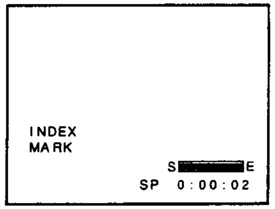
1 **Répéter les étapes 1 à 3 sous "Retour à zéro".**

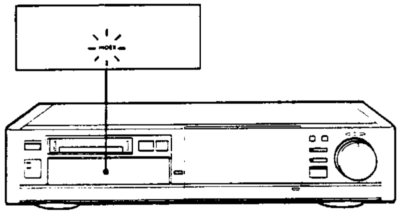
2 **Amener le curseur sur "GO TO ZERO — PLAY".**

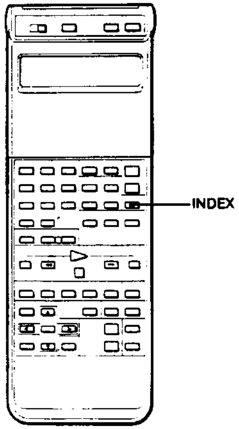
3 **Appuyer sur EXECUTE.**

**Remarques**
- Il se peut que la lecture du compteur et le point de la bande ne correspondent pas parfaitement. Se servir du compteur comme référence.
- Après plusieurs défilements en avance rapide ou en rebobinage, il se produira un décalage de plusieurs secondes sur l'affichage du compteur.
- Il se produira, de même, un décalage de plusieurs secondes quand est reproduite une bande, enregistrée successivement en mode SP et LP mélangé, ou une bande où se trouvent des espaces vierges entre les enregistrements.
- Si le retour à zéro ou la lecture après retour à zéro est commandé à un délai de ±1 minute, la recherche du point 0H00M00S prendra plus de temps.
- La bande s'arrête approximativement au point "0H00M00S" pendant le retour à zéro.

# Fonction d'indexation







## Marquage des signaux d'indexation

Une position donnée sur une bande peut être facilement localisée par détection de signaux d'indexation. Il existe deux façons, une automatique et une manuelle, de marquer ces signaux. Lorsqu'un signal d'indexation a été posé, le témoin INDEX clignote sur le panneau d'affichage et le témoin INDEX MARK s'allume sur l'écran du téléviseur.

### *Pose automatique d'index*

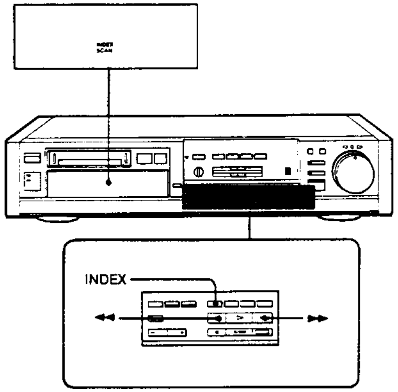
Un index est automatiquement placé sur la bande quand le magnétoscope commence un enregistrement.

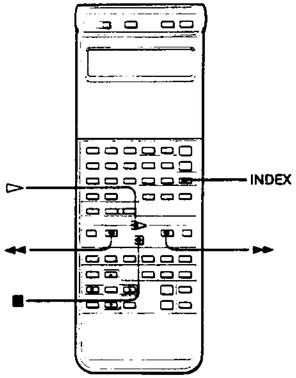
### *Pose manuelle d'index*

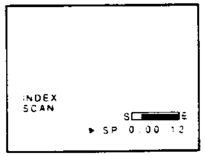
Des signaux d'indexation peuvent être posés aux points souhaités pendant l'enregistrement ou la lecture. Il suffit d'appuyer sur INDEX MARK pour en poser un.

**Remarques**

- Laisser un intervalle d'au moins 2 minutes entre deux points d'indexation de manière que le magnétoscope puisse les détecter avec précision.
- Le son enregistré sur la bande sera inaudible et une barre noire apparaîtra dans le bas de l'image pendant le marquage d'un signal d'indexation au cours de la lecture. Cependant, les signaux enregistrés ne seront nullement affectés.
- Quand le témoin EDIT est allumé sur le panneau d'affichage, la pose ou l'effacement de signaux d'indexation est impossible.
- La pose de signaux d'indexation est impossible sur une bande dont le segment de sécurité est ouvert.







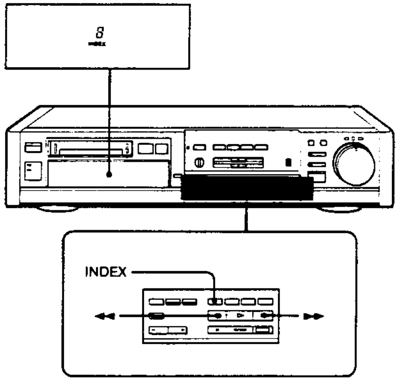
## Exploration des points d'indexation—INDEX SCAN

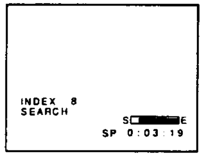
### *Exploration du début de chaque point d'indexation pendant la surveillance de l'image*

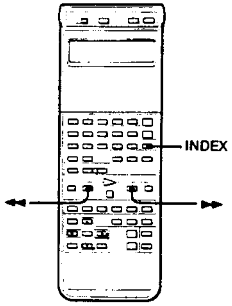
1. **Installer une cassette où ont été marqués des points d'indexation.**
2. **Appuyer sur INDEX en mode de lecture ou de pause à la lecture.**
3. **Appuyer sur ►► pour passer ou sur ◄◄ pour revenir à l'index suivant.**
   La bande est explorée en avant par ►► et en arrière par ◄◄ jusqu'au point d'indexation suivant et elle y sera reproduite pendant 10 secondes environ.
4. **Pour continuer la lecture, appuyer sur ▷.**
   Si aucune touche n'est actionnée, la bande est automatiquement explorée jusqu'à l'index suivant ou precédent.

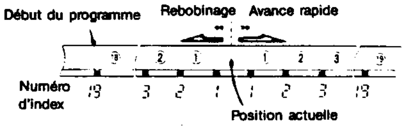
### *Exploration au début de chaque point d'indexation sans vision de l'image*

1. **Installer une cassette où ont été marqués des points d'indexation.**
2. **Appuyer sur INDEX en mode d'arrêt.**
3. **Appuyer sur ►► pour passer ou sur ◄◄ pour revenir à l'index suivant.**
   La bande sera avancée par ►► ou rebobinée par ◄◄ jusqu'au point d'indexation sans aucune image sur l'écran et elle sera ensuite reproduite pendant 10 secondes environ.
4. **Appuyer sur ▷ pour continuer la lecture à partir de ce point d'indexation.**
   Si aucune touche n'est actionnée, la bande est automatiquement explorée jusqu'à l'index suivant ou précédent.









## Recherche d'un point d'indexation—INDEX SEARCH

Une recherche directe d'un point d'indexation donné est possible en déterminant à combien d'index celui de destination se trouve, en amont ou en aval, par rapport à la position actuelle sur la bande. Il est possible de rechercher un maximum de 19 index à partir de la position courante. Le magnétoscope fait alors le décompte des index à chercher et il affiche leur nombre sur l'écran du téléviseur et sur le panneau d'affichage.

1 **Installer une cassette, comportant des points d'indexation.**

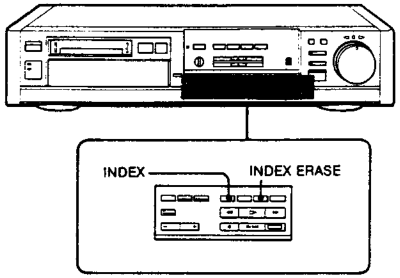
2 **Appuyer sur INDEX en mode d'arrêt, de lecture ou de pause à la lecture.**

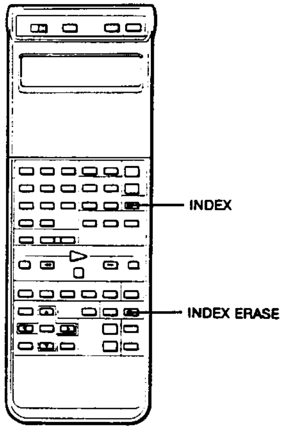
3 **Appuyer sur INDEX jusqu'à ce que soit indiqué, sur l'écran du téléviseur ou sur le panneau d'affichage, le nombre d'index à décompter pour atteindre la scène souhaitée.**

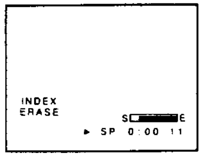
4 **Appuyer respectivement sur ◄◄ ou sur ►► si l'index est en amont ou en aval de la position actuelle sur la bande.**
Le magnétoscope commence la recherche et le nombre d'index est décompté jusqu'à zéro. La lecture commence.

### *Correction d'un nombre d'index*

Appuyer sur ■ et répéter les étapes 2 à 4 ci-avant.







## Effacement d'un index

Il est possible d'effacer un index, placé sur une bande.

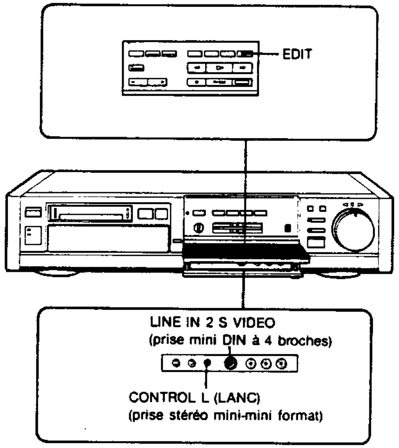
1 **Installer une cassette, comportant des points d'indexation.**

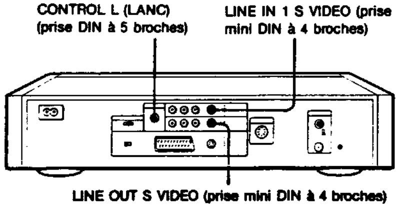
2 **Localiser l'index à effacer par exploration ou recherche d'index.**

3 **Dans les 10 secondes environ, appuyer sur INDEX ERASE pendant que la bande est reproduite.**
Si le signal d'indexation est effacé pendant l'exploration d'index, la lecture normals commence.
Si le signal d'indexation est effacé pendant la recherche d'index, la lecture normale commence.

**Remarques**
- Appuyer sur INDEX ERASE plus de 2 secondes après le début de la lecture.
- Il sera impossible d'effacer un signal d'indexation si le segment de sécurité de la cassette est ouvert.
- Pendant l'effacement d'un signal d'indexation, le son original de la bande devient inaudible et une barre noire apparaît dans le bas de l'image reproduite. Toutefois, les signaux enregistrés ne seront nullement affectés.
- Quand le témoin EDIT est allumé sur le panneau d'affichage, la pose et l'effacement de signaux d'indexation sont impossibles.
- Les signaux d'indexation, posés par un magnétoscope tel que ceux de la série EV-S850 peuvent être détectés par cet appareil, mais pas être effacés. De même, les signaux d'indexation, posés par ce magnétoscope, peuvent être détectés par un de la série EV-S850, mais pas être effacés.
- Lorsque le son d'une portion, où se trouve un signal d'indexation, est copié, il se peut que le signal en question soit effacé.

# Avant le montage


EDIT
LINE IN 2 S VIDEO
(prise mini DIN à 4 broches)
CONTROL L (LANC)
(prise stéréo mini-mini format)


CONTROL L (LANC)
(prise DIN à 5 broches)
LINE IN 1 S VIDEO (prise mini DIN à 4 broches)
LINE OUT S VIDEO (prise mini DIN à 4 broches)

On pourra créer ses propres programmes vidéo en faisant appel au montage de bandes avec d'autres magnétoscopes. Examiner les exemples suivants, pour acquérir les notions qui permettront d'accroître le plaisir de la vidéo.

## Emploi du mode EDIT

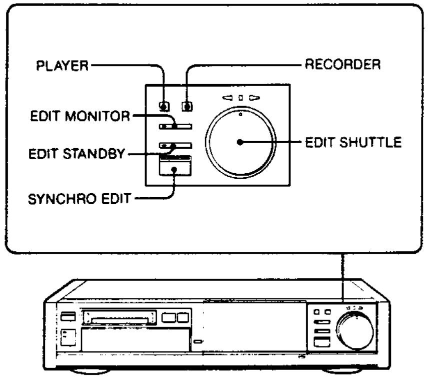
Le mode EDIT, mis en service par la touche EDIT de l'appareil, permet la lecture d'images de plus haute qualité pendant les travaux de montage. Si l'autre magnétoscope, nécessaire au montage, est doté de cette fonction, la mettre en service. Noter, toutefois, que même en utilisant le mode EDIT pendant le montage, la qualité du son et des images de la bande montée sera légèrement inférieure à celle de l'originale. Eviter, dès lors, d'utiliser une bande montée pour en faire des copies.

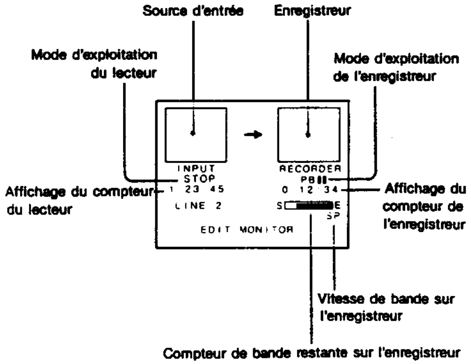
## Emploi du connecteur CONTROL L (LANC)

Si le second magnétoscope est pourvu d'un connecteur de contrôle Sony LANC CONTROL L (prise stéréo mini-mini format ou de type DIN à 5 broches), des travaux de montage synchronisé sont possibles. Le second magnétoscope sera télécommandé par les commandes de la section de montage du panneau avant de cet appareil. Se reporter à l'exemple suivant pour connaître, par la pratique, les réglages et les démarches à effectuer pour un montage synchronisé.

## Utilisation des prises S VIDEO

Vérifier si le deuxième magnétoscope est doté de prises d'entrée et de sortie S VIDEO. Le fait d'employer ces prises permet d'obtenir des images montées de meilleure qualité.


PLAYER
RECORDER
EDIT MONITOR
EDIT STANDBY
SYNCHRO EDIT
EDIT SHUTTLE


Source d'entrée
Enregistreur
Mode d'exploitation du lecteur
Mode d'exploitation de l'enregistreur
INPUT
STOP
1 23 45
LINE 2
RECORDER
PB ▮▮
0 12 34
S E
SP
EDIT MONITOR
Affichage du compteur du lecteur
Affichage du compteur de l'enregistreur
Vitesse de bande sur l'enregistreur
Compteur de bande restante sur l'enregistreur

## Fonctions pratiques pour le montage synchronisé

***Bague EDIT SHUTTLE*** (montage à navette)
Elle permet un accès rapide à la scène souhaitée, tant sur l'appareil enregistreur que sur le lecteur.

***Touches et témoin PLAYER/RECORDER***
Le témoin s'allume pour indiquer quel magnétoscope doit être contrôlé par la bague EDIT SHUTTLE.

***Touche EDIT MONITOR***
Elle affiche l'image de l'appareil enregistreur ainsi que la source d'entrée sur l'écran.

***Touche EDIT STANDBY***
Elle affiche automatiquement l'écran de surveillance de montage (EDIT MONITOR) lorsque l'enregistreur est en mode de pause à l'enregistrement et le lecteur en mode de pause à la lecture. L'entrée LINE IN 2 sera automatiquement choisie comme source d'entrée.

**Remarque**
Lorsque l'autre magnétoscope est contrôlé par la bague EDIT SHUTTLE, tourner lentement celle-ci pour ne pas dépasser la position de la vitesse de bande souhaitée.

## Affichage EDIT MONITOR pendant le montage

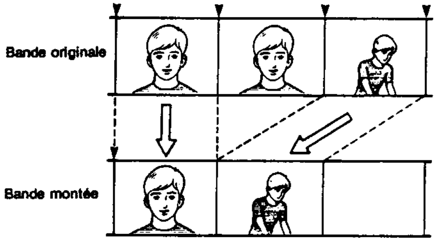
**Remarques**
- Le câble avec un astérisque (*) est optionnel.
- La flèche ⇨ indique le parcours du signal.

## Les diverses méthodes de montage de bande

Diverses méthodes permettent de réaliser facilement des montages précis avec ce magnétoscope. Choisir la méthode qui convient à l'objectif visé et à l'équipement vidéo/audio utilisé.

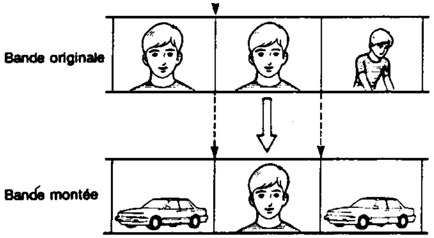
### *Montage par assemblage*

Seules les portions souhaitées d'une bande originale sont montées, une à une, sur une autre bande.



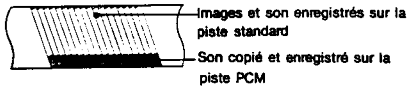
### *Montage par insertion*

Une portion pré-enregistrée d'une bande peut être remplacée par une nouvelle scène. Déterminer le seuil du début et le seuil de la fin sur le magnétoscope enregistreur.



### *Montage audio*

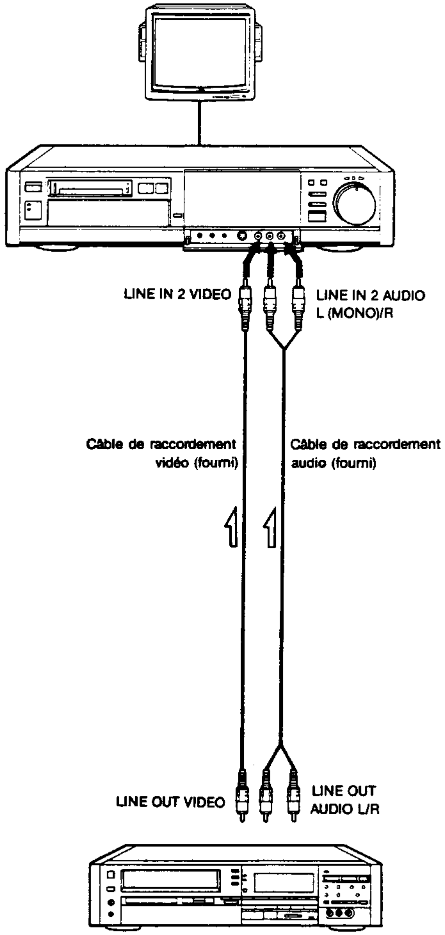
Le son enregistré sur la piste audio PCM peut être remplacé par un nouveau son sans modifier les images et le son, enregistrés sur la piste standard.


Images et son enregistrés sur la piste standard
Son copié et enregistré sur la piste PCM

**Remarques**
- Il se peut que l'image soit distordue au seuil final d'un montage à insertion.
- La lecture à diverses vitesses d'une bande montée depuis ou sur un autre magnétoscope risque de subir des distorsions.

| **Méthode de montage** | **P: Lecteur**<br>**R: Enregistreur** | **Page** |
|---|---|---|
| Montage de base | P: Un magnétoscope<br>R: Ce magnétoscope | 74- |
| | P: Ce magnétoscope<br>R: Un magnétoscope | 75- |
| Montage par assemblage (Avec emploi de fonction de montage synchronisé) | P: Camescope 8 mm avec prise REMOTE (stéréo mini-mini format)<br>R: Ce magnétoscope | 76- |
| | P: Magnétoscope 8 mm ou VHS avec connecteur CONTROL L (LANC) (DIN 5 broches)<br>R: Ce magnétoscope | 79- |
| Montage à insertion (Avec emploi de fonction de montage synchronisé) | P: Camescope 8 mm avec prise REMOTE (stéréo mini-mini format)<br>R: Ce magnétoscope | 82- |
| Montage manuel par assemblage | P: Un magnétoscope<br>R: Ce magnétoscope | 85- |
| Montage manuel par insertion | P: Un magnétoscope<br>R: Ce magnétoscope | 87- |
| Copie audio | P: a) Chaîne audio<br>b) Microphone<br>R: Ce magnétoscope | 89- |

# Montage de base


LINE IN 2 VIDEO
LINE IN 2 AUDIO L (MONO)/R
Câble de raccordement vidéo (fourni)
Câble de raccordement audio (fourni)
LINE OUT VIDEO
LINE OUT AUDIO L/R

## (1) Montage d'une bande depuis un autre magnétoscope

***Connexions***

- Effectuer les branchements en observant l'illustration.
- Si l'autre magnétoscope est muni d'un connecteur de sortie S VIDEO, effectuer cette connexion.
- Si l'autre magnétoscope est du type monaural, raccorder la fiche blanche à la prise de sortie audio de l'autre magnétoscope et la fiche blanche à l'autre bout sur la prise LINE IN 2 AUDIO L (MONO) de ce magnétoscope-ci.

***Préparatifs***

**Sur l'autre magnétoscope, c.à.d. le lecteur**

- Mettre le mode EDIT en service s'il en est équipé.

**Sur ce magnétoscope-ci, c.à.d. l'enregistreur**

- A l'aide du sélecteur INPUT SELECT. choisir l'entrée de ligne auquel est raccordé le lecteur.
- A l'aide du sélecteur REC MODE, choisir le mode d'enregistrement SP ou LP.
- Ajuster le niveau d'enregistrement par le réglage REC LEVEL (page 53).

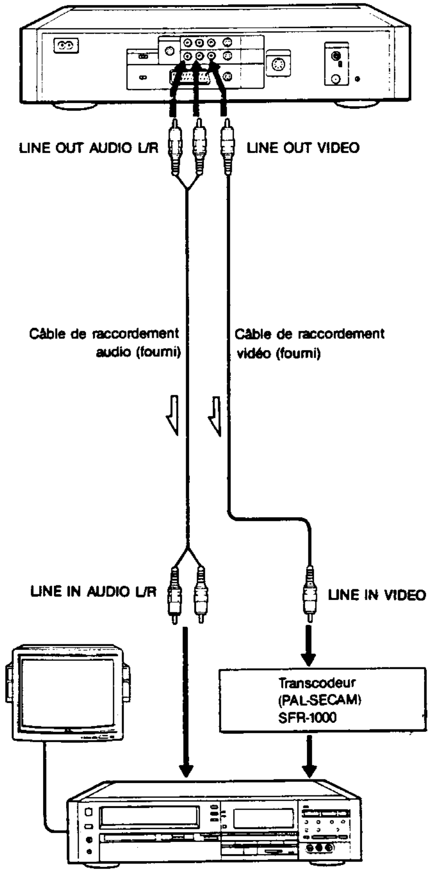
***Marche à suivre***

1 **Mettre les deux appareils sous tension.**

2 **Installer la bande de source dans le lecteur et installer la bande à enregistrer dans l'enregistreur.**

3 **Effectuer la lecture sur le lecteur et l'enregistrement sur l'enregistreur.**

**Remarque**
Eviter d'effectuer simultanément les connexions VIDEO et S VIDEO.


LINE OUT AUDIO L/R
LINE OUT VIDEO
Câble de raccordement audio (fourni)
Câble de raccordement vidéo (fourni)
LINE IN AUDIO L/R
LINE IN VIDEO
Transcodeur
(PAL-SECAM)
SFR-1000

## (2) Montage d'une bande vers un autre magnétoscope

***Connexions***

- Effectuer les branchements en observant l'illustration.
- Si l'autre magnétoscope est muni d'un connecteur d'entrée S VIDEO, effectuer cette connexion.
- Si l'autre magnétoscope est du type monaural, effectuer le branchement avec un câble de raccordement audio RK-C71 en option.
- Si l'autre magnétoscope est d'un modèle uni-système SECAM, effectuer les connexions en utilisant un transcodeur PAL-SECAM comme illustré.

***Préparatifs***

**Sur ce magnétoscope-ci, c.à.d. le lecteur**

- Régler le sélecteur AUDIO MONITOR à la position adéquate en se reportant à "Sélection du son à surveiller" en page 37.
- Mettre le mode EDIT en service.

**Sur l'autre magnétoscope, c.à.d. l'enregistreur**

- Choisir l'entrée de ligne à laquelle est raccordé le lecteur.
- Mettre le mode EDIT en service si l'appareil en est équipé.

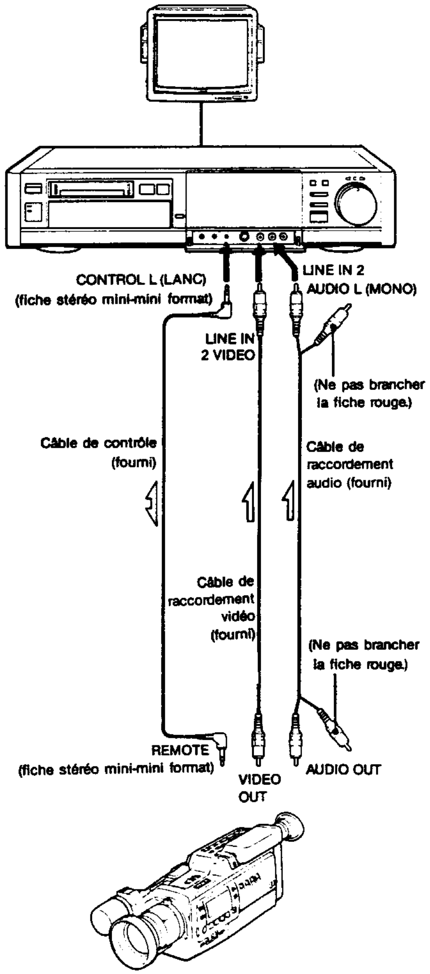
***Marche à suivre***

1 **Mettre les deux appareils sous tension.**

2 **Installer la bande de source dans le lecteur et installer la bande à enregistrer dans l'enregistreur.**

3 **Effectuer la lecture sur le lecteur et l'enregistrement sur l'enregistreur.**

# Montage synchronisé


CONTROL L (LANC)
(fiche stéréo mini-mini format)
LINE IN 2
AUDIO L (MONO)
LINE IN
2 VIDEO
(Ne pas brancher la fiche rouge.)
Câble de contrôle (fourni)
Câble de raccordement audio (fourni)
Câble de raccordement vidéo (fourni)
(Ne pas brancher la fiche rouge.)
REMOTE
(fiche stéréo mini-mini format)
VIDEO OUT
AUDIO OUT

## (1) Montage d'une bande depuis un camescope 8 mm

*Connexions*

- Effectuer les branchements en observant l'illustration.
- Si le camescope est muni d'un connecteur de sortie S VIDEO, effectuer cette connexion.
- Si l'autre magnétoscope est du type monaural, raccorder la fiche blanche à la prise de sortie audio de l'autre magnétoscope et la fiche blanche à l'autre bout sur la prise LINE IN 2 AUDIO L (MONO) de ce magnétoscope-ci.

*Préparatifs*

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**Sur l'autre magnétoscope, c.à.d. le lecteur**

- Mettre le mode EDIT en service s'il est disponible.
- Choisir LANC MODE S ou l'équivalent si cette sélection est possible.

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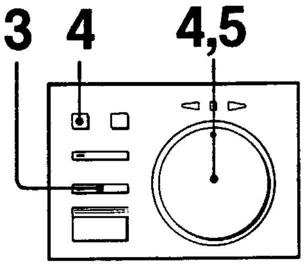
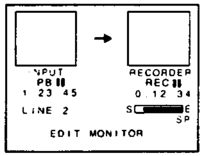
**Sur ce magnétoscope-ci, c.à.d. l'enregistreur**

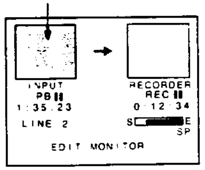
- Choisir LANC MODE M sur le menu MODE SET (page 31).
- A l'aide du sélecteur REC MODE, choisir le mode d'enregistrement SP ou LP.
- Ajuster le niveau d'enregistrement par le réglage REC LEVEL (page 53).
- En fonction de l'autre magnétoscope, choisir SHUTTLE MODE A ou B sur le menu MODE SET (page 31).



3


INPUT
PB ॥
1 23 45
LINE 2
RECORDER
REC ॥
0 12 34
S
E
SP
EDIT MONITOR

4,5


Déterminer le seuil du montage.
INPUT
PB ॥
1:35.23
LINE 2
RECORDER
REC ॥
0 12 34
S
E
SP
EDIT MONITOR

*Marche à suivre*

**1** **Mettre les deux appareils sous tension.**

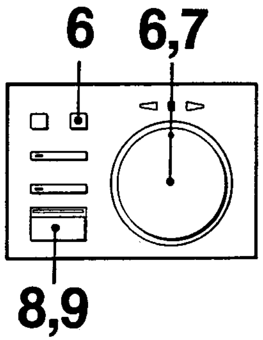
**2** **Installer la bande de source dans le lecteur et la bande à enregistrer dans l'enregistreur.**

**3** **Appuyer sur la touche EDIT STANDBY de l'enregistreur.**
L'écran EDIT MONITOR est alors affiché et LINE IN 2 sera automatiquement choisi pour le lecteur. La touche de contrôle PLAYER s'allumera. L'enregistreur se place alors en mode de pause à l'enregistrement, tandis que le lecteur entre en mode de pause à la lecture.

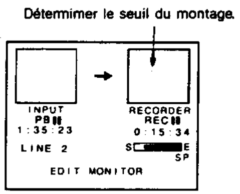
**4** **Confirmer que la touche de contrôle PLAYER est allumée et agir sur la bague EDIT SHUTTLE pour localiser le seuil de départ sur le lecteur.**
Les vitesses de lecture utilisables sont: REVIEW, PB ॥ (quand la bague EDIT SHUTTLE est relâchée), x 1/5 (avance lente), PB (vitesse normale en avant) et CUE.

**Remarque**
La lecture x 1/5 est contrôlable sur l'autre magnétoscope si celui-ci est doté de la fonction de vitesse de lecture x 1/5.

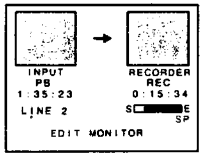
**5** **Relâcher la bague EDIT SHUTTLE dès qu'est trouvé le point souhaité.**
Le lecteur s'y place en mode de pause à la lecture.



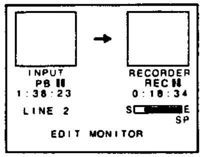
6
7


Détermimer le seuil du montage.
INPUT
PB ❚❚
1 : 35 : 23
LINE 2
RECORDER
REC ❚❚
0 : 15 : 34
S E
SP
EDIT MONITOR

8


INPUT
PB
1 : 35 : 23
LINE 2
RECORDER
REC
0 : 15 : 34
S E
SP
EDIT MONITOR

9


INPUT
PB ❚❚
1 : 38 : 23
LINE 2
RECORDER
REC ❚❚
0 : 18 : 34
S E
SP
EDIT MONITOR

**6** **Appuyer sur la touche de contrôle RECORDER pour l'allumer et agir sur la bague EDIT SHUTTLE pour localiser le point de départ sur l'enregistreur.**
Les vitesses de lecture utilisables sont: REVIEW, – x 1 (vitesse normale en arrière), REC ❚❚ (quand la bague EDIT SHUTTLE est relâchée), x 1/5 (avance lente), x 1 (vitesse normale en avant) et CUE.

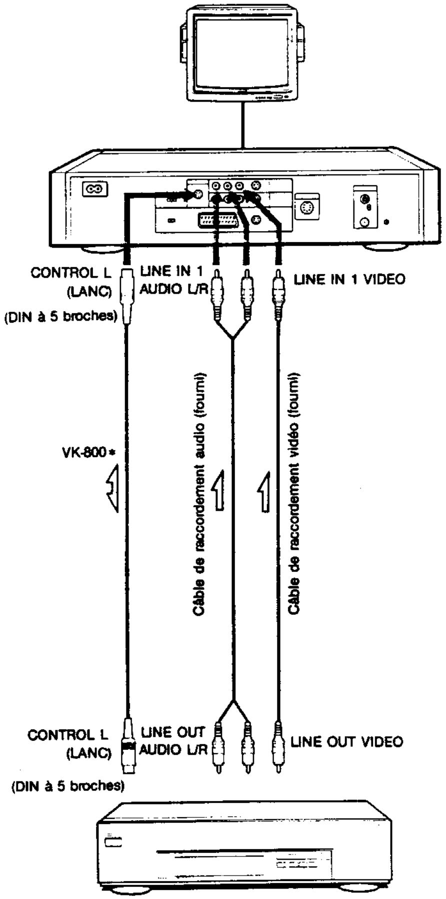
**7** **Relâcher la bague EDIT SHUTTLE dès que le point souhaité est localisé.**
L'enregistreur s'y place en mode de pause à l'enregistrement.

**8** **Appuyer sur SYNCHRO EDIT.**
Le lecteur commence la lecture et l'enregistreur commence l'enregistrement.

**9** **Appuyer sur SYNCHRO EDIT au seuil final du montage.**
Le lecteur s'y place en mode de pause à la lecture et l'enregistreur en mode de pause à l'enregistrement.

**Montage de plusieurs scènes**
Répéter les étapes de 4 à 9.

**A la fin du montage**
Appuyer sur la touche EDIT STANDBY. Les deux appareils s'arrêtent et l'affichage EDIT MONITOR repasse à l'écran de télévision normal.


CONTROL L
(LANC)
(DIN à 5 broches)
LINE IN 1
AUDIO L/R
LINE IN 1 VIDEO
VK-800 *
Câble de raccordement audio (fourni)
Câble de raccordement vidéo (fourni)
CONTROL L
(LANC)
(DIN à 5 broches)
LINE OUT
AUDIO L/R
LINE OUT VIDEO

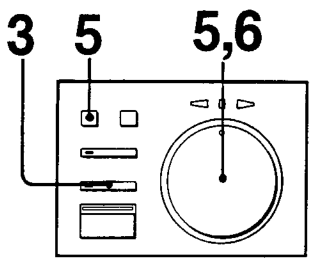
## (2) Montage d'une bande depuis un magnétoscope 8 mm ou VHS

***Connexions***
- Effectuer les branchements en observant l'illustration.
- Si l'autre magnétoscope est muni d'un connecteur de sortie S VIDEO, effectuer cette connexion.
- Si l'autre magnétoscope est du type monaural, effectuer le branchement avec un câble de raccordement audio RK-C71 en option.

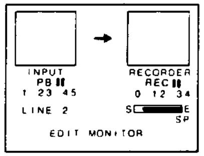
***Préparatifs***

**Sur l'autre magnétoscope, c.à.d. le lecteur**
- Mettre le mode EDIT en service s'il est disponible.
- Choisir LANC MODE S ou l'équivalent si cette sélection est disponible.

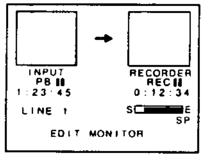
**Sur ce magnétoscope-ci, c.à.d. l'enregistreur**
- Choisir LANC MODE M sur le menu MODE SET (page 31).
- A l'aide de REC MODE, choisir le mode d'enregistrement SP ou LP.
- Ajuster le niveau d'enregistrement avec le réglage REC LEVEL (page 53).
- En fonction de l'autre magnétoscope, choisir SHUTTLE MODE A ou B sur le menu MODE SET (page 31).



3

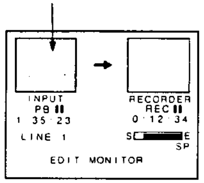

INPUT
PB ⏸
1 23 45
LINE 2
RECORDER
REC ⏸
0 12 34
S
E
SP
EDIT MONITOR

4


INPUT
PB ⏸
1:23:45
LINE 1
RECORDER
REC ⏸
0:12:34
S
E
SP
EDIT MONITOR

5
6

Déterminer le seuil du montage.


INPUT
PB ⏸
1 35 23
LINE 1
RECORDER
REC ⏸
0 12 34
S
E
SP
EDIT MONITOR

***Marche à suivre***

1 **Mettre les deux appareils sous tension.**

2 **Installer la bande de source dans le lecteur et la bande à enregistrer dans l'enregistreur.**

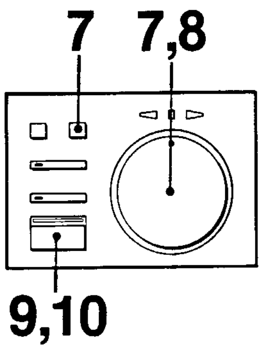
3 **Appuyer sur la touche EDIT STANDBY de l'enregistreur.**
L'écran EDIT MONITOR est alors affiché. La touche de contrôle PLAYER s'allumera. L'enregistreur se place alors en mode de pause à l'enregistrement, tandis que le lecteur entre en mode de pause à la lecture.

4 **Appuyer sur INPUT SELECT pour changer l'affichage de la source d'entrée, de LINE 2 à LINE 1.**

5 **Confirmer que la touche de contrôle PLAYER est allumée et agir sur la bague EDIT SHUTTLE pour localiser le seuil de départ sur le lecteur.**
Les vitesses de lecture utilisables sont: REVIEW. PB ⏸ (quand la bague EDIT SHUTTLE est relâchée), x 1/5 (avance lente), PB (vitesse normale en avant) et CUE.

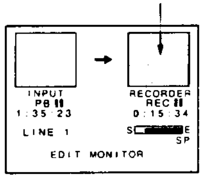
**Remarque**
La lecture x 1/5 est contrôlable sur l'autre magnétoscope si celui-ci est doté de la fonction de vitesse de lecture x 1/5.

6 **Relâcher la bague EDIT SHUTTLE dès qu'est trouvé le point souhaité.**
Le lecteur s'y place en mode de pause à la lecture.

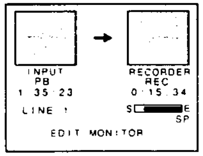


7
8

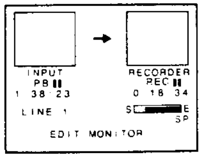
Déterminer le seuil du montage.


INPUT
PB ⏸
1:35:23
LINE 1
RECORDER
REC ⏸
0:15:34
S
E
SP
EDIT MONITOR

9


INPUT
PB
1 35 23
LINE 1
RECORDER
REC
0 15 34
S
E
SP
EDIT MONITOR

10


INPUT
PB ⏸
1 38 23
LINE 1
RECORDER
REC ⏸
0 18 34
S
E
SP
EDIT MONITOR

7 **Appuyer sur la touche de contrôle RECORDER pour l'allumer et agir sur la bague EDIT SHUTTLE pour localiser le point de départ sur l'enregistreur.**
Les vitesses de lecture utilisables sont: REVIEW, – x 1 (vitesse normale en arrière), REC ⏸ (quand la bague EDIT SHUTTLE est relâchée), x 1/5 (avance lente), x 1 (vitesse normale en avant) et CUE.

8 **Relâcher la bague EDIT SHUTTLE dès que le point souhaité est localisé.**
L'enregistreur s'y place en mode de pause à l'enregistrement.

9 **Appuyer sur SYNCHRO EDIT.**
Le lecteur commence la lecture et l'enregistreur commence l'enregistrement.

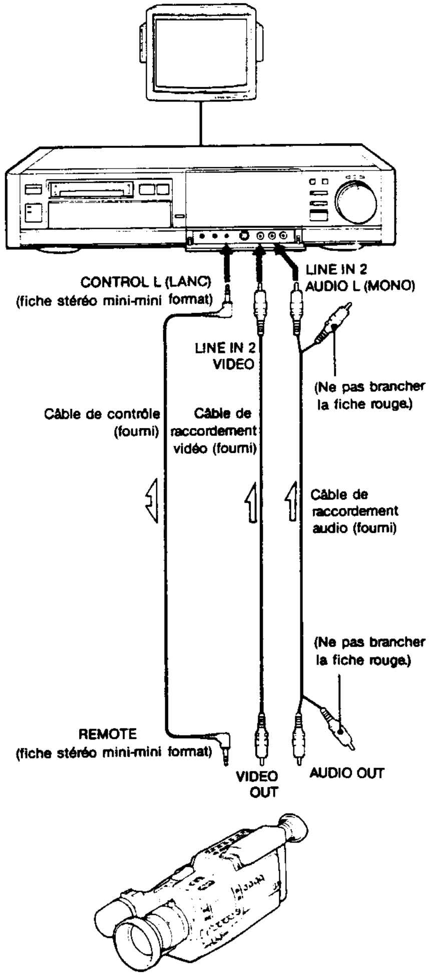
10 **Appuyer sur SYNCHRO EDIT au seuil final du montage.**
Le lecteur s'y place en mode de pause à la lecture et l'enregistreur en mode de pause à l'enregistrement.

**Montage de plusieurs scènes**
Répéter les étapes de **4** à **10**.

**A la fin du montage**
Appuyer sur la touche EDIT STANDBY.
Les deux appareils s'arrêtent et l'affichage EDIT MONITOR repasse à l'écran de télévision normal.

**Raccordement du lecteur sur LINE IN 2**
Se servir du câble de raccordement VK-810 en option (prise DIN 5 broches à stéréo mini-mini format) pour le branchement de CONTROL L LANC. Les démarches seront les mêmes que sous "(1) Montage d'une bande depuis un camescope 8 mm".

# Montage par insertion


CONTROL L (LANC)
(fiche stéréo mini-mini format)
LINE IN 2
AUDIO L (MONO)
LINE IN 2
VIDEO
Câble de contrôle
(fourni)
Câble de
raccordement
vidéo (fourni)
(Ne pas brancher
la fiche rouge.)
Câble de
raccordement
audio (fourni)
(Ne pas brancher
la fiche rouge.)
REMOTE
(fiche stéréo mini-mini format)
VIDEO
OUT
AUDIO OUT

## (1) Insertion de scènes depuis un camescope 8 mm

*Connexions*

- Effectuer les branchements en observant l'illustration.
- Si le camescope est muni d'un connecteur de sortie S VIDEO, effectuer cette connexion.
- Si l'autre magnétoscope est du type monaural, raccorder la fiche blanche à la prise de sortie audio de l'autre magnétoscope et la fiche blanche à l'autre bout sur la prise LINE IN 2 AUDIO L (MONO) de ce magnétoscope-ci.

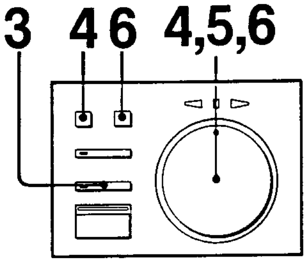
*Préparatifs*

**Sur l'autre magnétoscope, c.à.d. le lecteur**

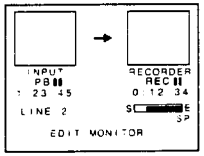
- Mettre le mode EDIT en service s'il est disponible.
- Choisir LANC MODE S ou l'équivalent si cette sélection est possible.

**Sur ce magnétoscope-ci, c.à.d. l'enregistreur**

- Choisir LANC MODE M sur le menu MODE SET (page 31).
- A l'aide du sélecteur REC MODE. choisir le mode d'enregistrement SP ou LP.
- Ajuster le niveau d'enregistrement par le réglage REC LEVEL (page 53).
- En fonction de l'autre magnétoscope, choisir SHUTTLE MODE A ou B sur le menu MODE SET (page 31).

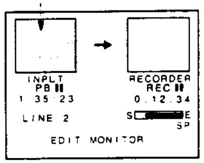


3


INPUT
PB II
1 23 45
LINE 2
RECORDER
REC II
0 12 34
S
E
SP
EDIT MONITOR

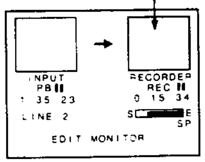
4
5

Déterminer le seuil de départ du montage.


INPUT
PB II
1 35 23
LINE 2
RECORDER
REC II
0 12 34
S
E
SP
EDIT MONITOR

6

Déterminer le seuil de sortie du montage par insertion.


INPUT
PB II
1 35 23
LINE 2
RECORDER
REC II
0 15 34
S
E
SP
EDIT MONITOR

*Marche à suivre*

1 **Mettre les deux appareils sous tension.**

2 **Installer la bande de source dans le lecteur et la bande à enregistrer dans l'enregistreur.**

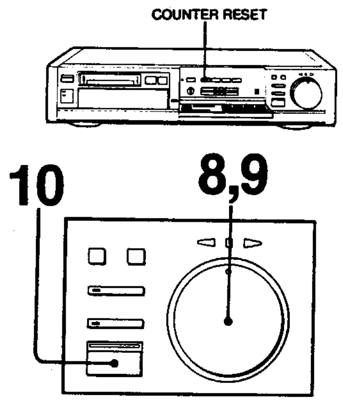
3 **Appuyer sur la touche EDIT STANDBY de l'enregistreur.**
L'écran EDIT MONITOR est alors affiché et LINE 2 sera automatiquement choisi pour le lecteur. La touche de contrôle PLAYER s'allumera. L'enregistreur se place alors en mode de pause à l'enregistrement, tandis que le lecteur entre en mode de pause à la lecture.

4 **Confirmer que la touche de contrôle PLAYER est allumée et agir sur la bague EDIT SHUTTLE pour localiser le seuil de départ sur le lecteur.**
Les vitesses de lecture utilisables sont: REVIEW, PB II (quand la bague EDIT SHUTTLE est relâchée), x 1/5 (avance lente), PB (vitesse normale en avant) et CUE.

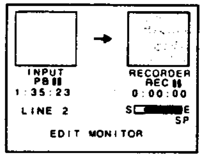
**Remarque**
La lecture x 1/5 est contrôlable sur l'autre magnétoscope si celui-ci est doté de la fonction de vitesse de lecture x 1/5.

5 **Relâcher la bague EDIT SHUTTLE dès qu'est trouvé le point souhaité.**
Le lecteur s'y place en mode de pause à la lecture.

6 **Appuyer sur la touche de contrôle RECORDER pour l'allumer et agir sur la bague EDIT SHUTTLE pour localiser le point où doit s'achever l'insertion.**
Les vitesses de lecture utilisables sont: REVIEW, – X 1 (vitesse normale en arrière), REC II (quand la bague EDIT SHUTTLE est relâchée), x 1/5 (avance lente), x 1 (vitesse normale en avant) et CUE.

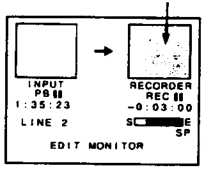

COUNTER RESET
10
8,9

7

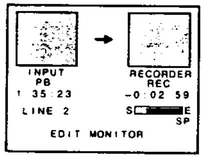

INPUT
PB ▮▮
1:35:23
LINE 2
RECORDER
REC ▮▮
0:00:00
S E
SP
EDIT MONITOR

8
9

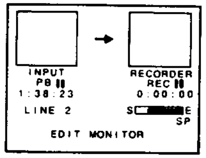
Déterminer le seuil de départ d'insertion.


INPUT
PB ▮▮
1:35:23
LINE 2
RECORDER
REC ▮▮
-0:03:00
S E
SP
EDIT MONITOR

10


INPUT
PB
1 35 23
LINE 2
RECORDER
REC
-0 02 59
S E
SP
EDIT MONITOR

11


INPUT
PB ▮▮
1:38:23
LINE 2
RECORDER
REC ▮▮
0:00:00
S E
SP
EDIT MONITOR

7 **Appuyer sur la touche COUNTER RESET.**
Le compteur de bande de l'enregistreur affichera 0H00M00S.

8 **Agir sur la bague EDIT SHUTTLE pour rebobiner la bande et localiser le seuil où l'insertion doit commencer sur l'enregistreur.**

9 **Relâcher la bague EDIT SHUTTLE quand le seuil souhaité est trouvé.**
L'enregistreur s'y place en mode de pause à l'enregistrement.

10 **Appuyer sur la touche SYNCHRO EDIT.**
Le lecteur commence la lecture et l'enregistreur l'enregistrement.

11 **L'enregitrement s'arrête quand le compteur parvient à zéro.**
Le lecteur se place en mode de pause à la lecture et l'enregistreur en mode de pause à l'enregistrement.

---

**Montage de plusieurs scènes**
Répéter les étapes de 4 à 11.

---

**A la fin du montage**
Appuyer sur la touche EDIT STANDBY.
Les deux appareils s'arrêtent et l'affichage EDIT MONITOR repasse à l'écran de télévision normal.

**Remarque pendant le montage synchronisé**
La touche COUNTER RESET est inopérante.

# Montage manuel par assemblage

## (1) Montage d'une bande depuis un autre magnétoscope

*Connexions*
- Effectuer les branchements en consultant l'illustration sous "Montage de base (1) Montage d'une bande depuis un autre magnétoscope" (page 74).

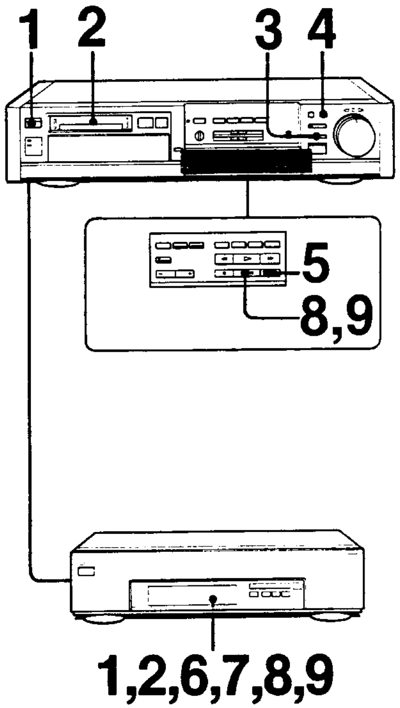
*Préparatifs*

---

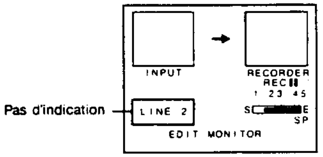
**Sur l'autre magnétoscope, c.à.d. le lecteur**
- Mettre le mode EDIT en service s'il est disponible.

---

**Sur ce magnétoscope-ci, c.à.d. l'enregistreur**
- A l'aide du sélecteur REC MODE, choisir le mode d'enregistrement SP ou LP.
- Ajuster le niveau d'enregistrement par le réglage REC LEVEL (page 53).
- Avec le sélecteur INPUT SELECT, choisir l'entrée de ligne à laquelle le lecteur est raccordé.



3



*Marche à suivre*

1 **Mettre les deux appareils sous tension.**

2 **Installer la bande de source dans le lecteur et la bande à enregistrer dans l'enregistreur.**

3 **Appuyer sur la touche EDIT MONITOR de l'enregistreur.**
L'écran EDIT MONITOR sera affiché.

4 **Appuyer sur la touche de contrôle RECORDER pour l'allumer et agir sur la bague EDIT SHUTTLE pour localiser le seuil de départ de l'enregistrement sur l'enregistreur.**
Une libération de la bague EDIT SHUTTLE fait entrer l'enregistreur en mode de pause à la lecture.

5 **Appuyer sur ● REC pour placer l'enregistreur en mode de pause à l'enregistrement.**

6 **Mettre le lecteur en service avec ses commandes et localiser le seuil de départ de la lecture.**

7 **Placer le lecteur en mode de pause à la lecture.**

8 **Annuler simultanément le mode de pause sur les deux magnétoscopes.**
Le lecteur commence la lecture et l'enregistreur commence l'enregistrement.

9 **Pour arrêter l'enregistrement, appuyer sur la touche II PAUSE de l'enregistreur, puis du lecteur.**

**Montage de plusieurs scènes**
Répéter les étapes de **4** à **9**.

**A la fin du montage**
Arrêter les deux magnétoscopes.

# Montage manuel par insertion

## (1) Montage d'une bande depuis un autre magnétoscope

*Connexions*

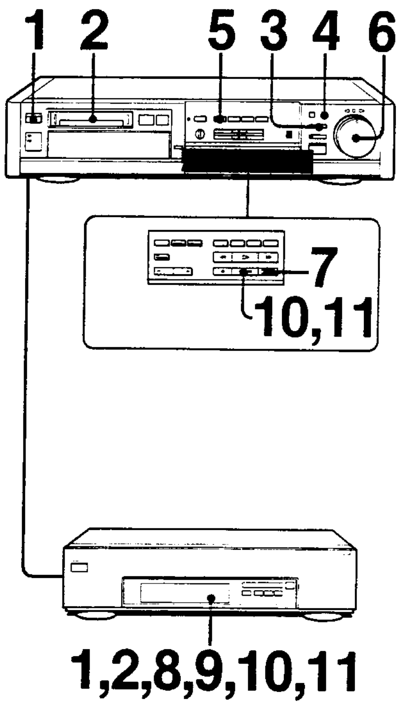
- Effectuer les branchements en consultant l'illustration sous "Montage de base (1) Montage d'une bande depuis un autre magnétoscope" (page 74).

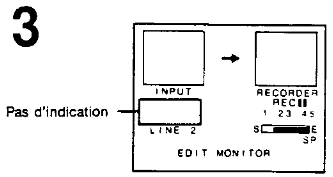
***Préparatifs***

**Sur l'autre magnétoscope, c.à.d. le lecteur**
- Mettre le mode EDIT en service s'il est disponible.

**Sur ce magnétoscope-ci, c.à.d. l'enregistreur**
- A l'aide du sélecteur REC MODE, choisir le mode d'enregistrement SP ou LP.
- Ajuster le niveau d'enregistrement par le réglage REC LEVEL (page 53).
- Avec le sélecteur INPUT SELECT, choisir l'entrée de ligne à laquelle le lecteur est raccordé.

## Montage manuel par insertion





*Marche à suivre*

1. **Mettre les deux appareils sous tension.**
2. **Installer la bande de source dans le lecteur et la bande à enregistrer dans l'enregistreur.**
3. **Appuyer sur la touche EDIT MONITOR de l'enregistreur.**
   L'écran EDIT MONITOR sera affiché.
4. **Appuyer sur la touche de contrôle RECORDER pour l'allumer et agir sur la bague EDIT SHUTTLE pour localiser le seuil où l'insertion doit s'achever.**
5. **Appuyer sur la touche COUNTER RESET.**
   Le compteur de bande de l'enregistreur est ramené à 0H00M00S.
6. **Agir sur la bague EDIT SHUTTLE pour rebobiner la bande et localiser le point où l'insertion doit commencer sur l'enregistreur.**
   La libération de la bague EDIT SHUTTLE fait entrer l'enregistreur en mode de pause à la lecture.
7. **Appuyer sur ● REC pour placer l'enregistreur en mode de pause à l'enregistrement.**
8. **Mettre le lecteur en service avec ses commandes et localiser le seuil de départ de la lecture.**
9. **Régler le lecteur en mode de pause à la lecture.**
10. **Annuler simultanément le mode de pause sur les deux magnétoscopes.**
    Le lecteur commence la lecture et l'enregistreur commence l'enregistrement.
11. **Ramener l'enregistreur en mode de pause à l'enregistrement quand le compteur atteint zéro. Régler le lecteur en mode de pause à la lecture.**

---

**Montage de plusieurs scènes**
Répéter les étapes de 4 à 11.

---

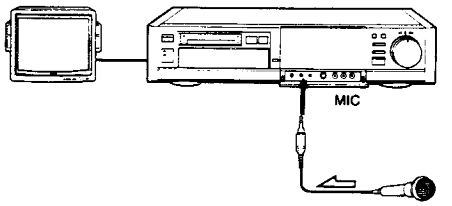
**A la fin du montage**
Arrêter les deux magnétoscopes.

## Copie audio

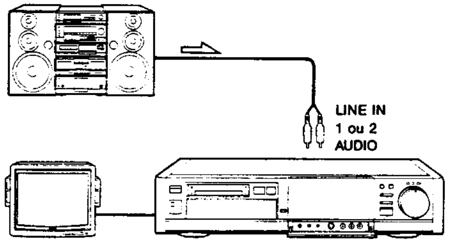
Tout en regardant ses images sur l'écran, il est possible d'ajouter de la musique ou des commentaires sur une bande préalablement enregistrée.
Le son copié sera enregistré sur la piste PCM.

### Connexions

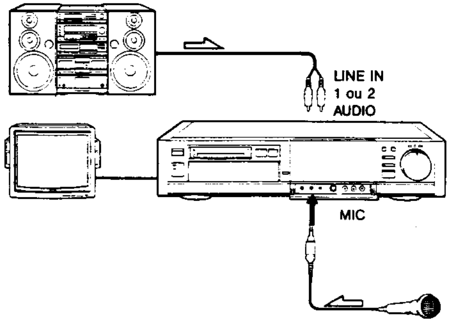
*Copie du son d'un microphone*



*Copie du son d'une chaîne audio*

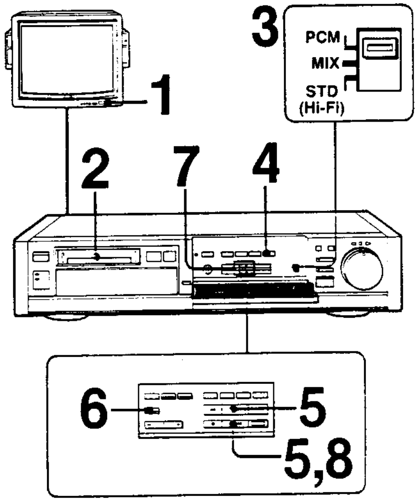


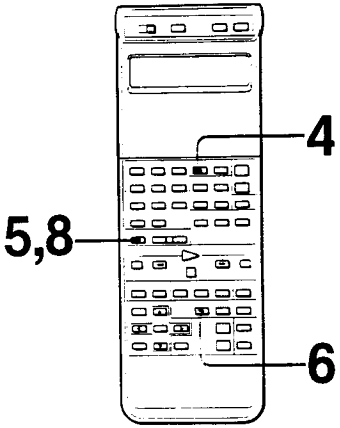
*Copie du son d'un microphone et d'une chaîne audio*



**Remarque**
Un microphone alimenté par enfichage ne peut pas être utilisé avec ce magnétoscope.

## Copie audio





### Marche à suivre

1 **Mettre le téléviseur sous tension et choisir l'entrée, réservée au magnétoscope, ou choisir la position de programme pour le magnétoscope.**

2 **Installer une cassette.**
L'appareil sera automatiquement mis sous tension.

3 **Régler le sélecteur AUDIO NONITOR sur PCM ou MIX.**

4 **A la copie du son de la chaîne audio, choisir l'entrée de ligne à laquelle la chaîne audio est raccordée en appuyant sur INPUT SELECT.**

5 **Reproduire la cassette pour localiser le point où la copie audio doit commencer et appuyer sur PAUSE/STILL II/▶◀ ou sur II PAUSE.**

6 **Appuyer sur AUDIO DUB.**
Le témoin AUDIO DUB s'allume sur le magnétoscope.

7 **Faire fonctionner les sources audio et ajuster le réglage REC LEVEL.**

8 **Appuyer à nouveau sur PAUSE/STILL II/▶◀ ou sur II PAUSE pour libérer le mode de pause à la lecture.**
La copie audio commence.

***Arrêt temporaire de la copie audio***
Appuyer sur PAUSE/STILL II/▶◀ ou sur II PAUSE.

***Arrêt de la copie audio***
Appuyer sur ■ STOP.

***Copie du son d'un programme télévisé***
Appuyer sur INPUT SELECT pour afficher le témoin TUNER et choisir la position de programme souhaitée. Effectuer ensuite les étapes de 2 à 5.

**Remarques**
- Pendant la copie, une bande noire ou des parasites apparaissent au centre et dans le bas de l'écran, mais l'image enregistrée n'en sera nullement affectée.
- Le son copié ne peut pas être reproduit sur un magnétoscope ou un camescope dépourvu de la fonction d'enregistrement/lecture PCM.

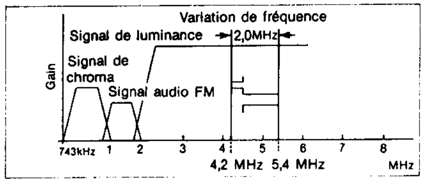
---

## Le système vidéo Hi8 (High Eight)

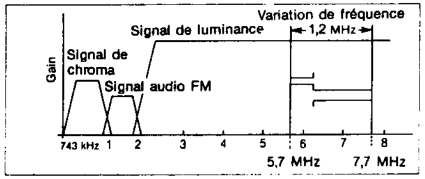
### Haute qualité d'image

Un élément essentiel pour la qualité de l'image est sa capacité de véhiculer l'information. Or, cette capacité peut être accrue par décalage de la fréquence porteuse FM. Dans le système vidéo de norme Hi8, la plage de la fréquence porteuse FM du signal de luminance a été portée à 5,7 - 7,7 MHz, alors qu'elle est de 4,2 - 5,4 MHz dans le cas du système vidéo 8 mm standard. Grâce à cette amélioration, la définition horizontale est augmentée.

**Attribution de fréquences du système video 8 mm standard**



**Attribution de fréquences du système video Hi8**



### Bande de haute qualité, adaptée au système vidéo de norme Hi8

Des bandes à métal évaporé ont été mises au point en exclusivité pour l'enregistrement Hi8. La forte énergie magnétique de ces bandes à métal évaporé, qui autorise un enregistrement à densité élevée, et la technologie de l'enregistrement vidéo Hi8 permettent de couvrir une large plage de fréquence et d'obtenir des images enregistrées d'une qualité excellente.

### Connecteurs d'entrée/sortie S VIDEO (signal de luminance/chrominance séparé)

Un appareil vidéo traditionnel transmet ou reçoit un signal vidéo composite, mais ce dernier a tendance à produire des interférences qui amoindrissent la qualité des images. En revanche, le connecteur S VIDEO transmet ou reçoit le signal vidéo, séparé en signal de luminance et en signal de chrominance.
Les papillotements et le maculage des couleurs de l'image sont atténués par cette séparation des signaux vidéo, tandis que la netteté est améliorée au point que les cheveux ou les lignes ténues restent clairement visibles. En outre, le connecteur S VIDEO garantit une perte minimale de la qualité de l'image lors des travaux de montage de bande.

### Compatibilité avec un magnétoscope 8 mm standard

Consulter le tableau ci-après en ce qui concerne la compatibilité entre le système vidéo de norme Hi8 et le système 8 mm standard.

***Enregistrement sur ce magnétoscope***

| Bande utilisée | Témoin Hi8 | Système d'enregistrement |
|---|---|---|
| Bande Hi8 | Allumé | Hi8 |
| | Eteint | Système 8 mm standard |
| Bande 8 mm standard | Eteint automatiquement | Système 8 mm standard |

***Lecture sur ce magnétoscope***

| Bande utilisée | Système de lecture |
|---|---|
| Bande enregistrée selon le système vidéo Hi8 | Le système vidéo de la source à reproduire est automatiquement choisi. |
| Bande enregistrée selon le système vidéo 8 mm | |

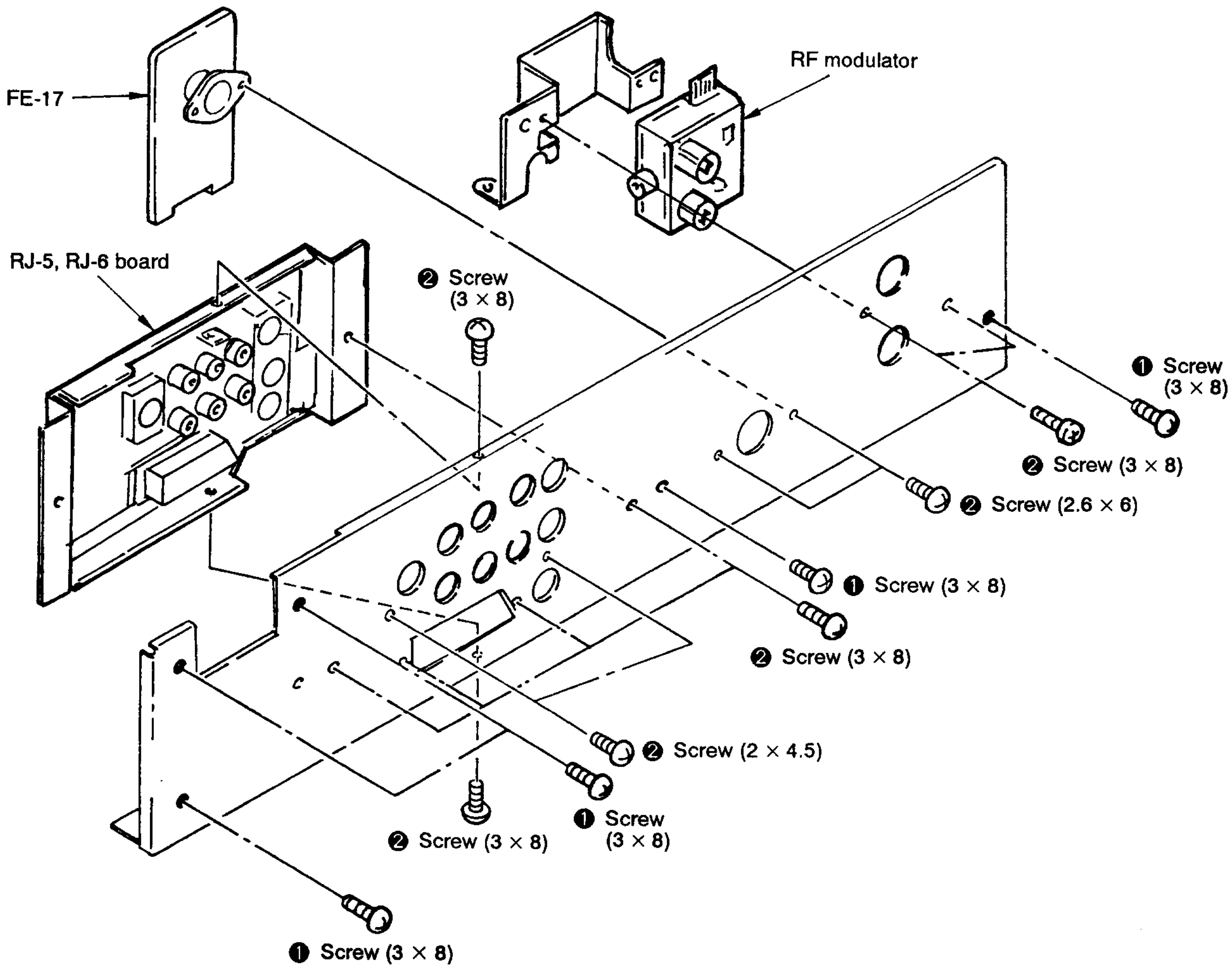
**Remarques**
- L'enregistrement et la lecture Hi8 ne sont possibles qu'avec une bande Hi8.
- Une bande 8 mm standard ne peut servir pour l'enregistrement ou la lecture selon le système vidéo de norme Hi8.
- La vitesse d'enregistrement du système vidéo Hi8 est compatible avec le système vidéo 8 mm standard.
La durée d'enregistrement/lecture est de 1,5 heure en mode SP et de 3 heures en mode LP en utilisant une bande E5-90HME ou équivalente.

# SECTION 2

# DISASSEMBLY

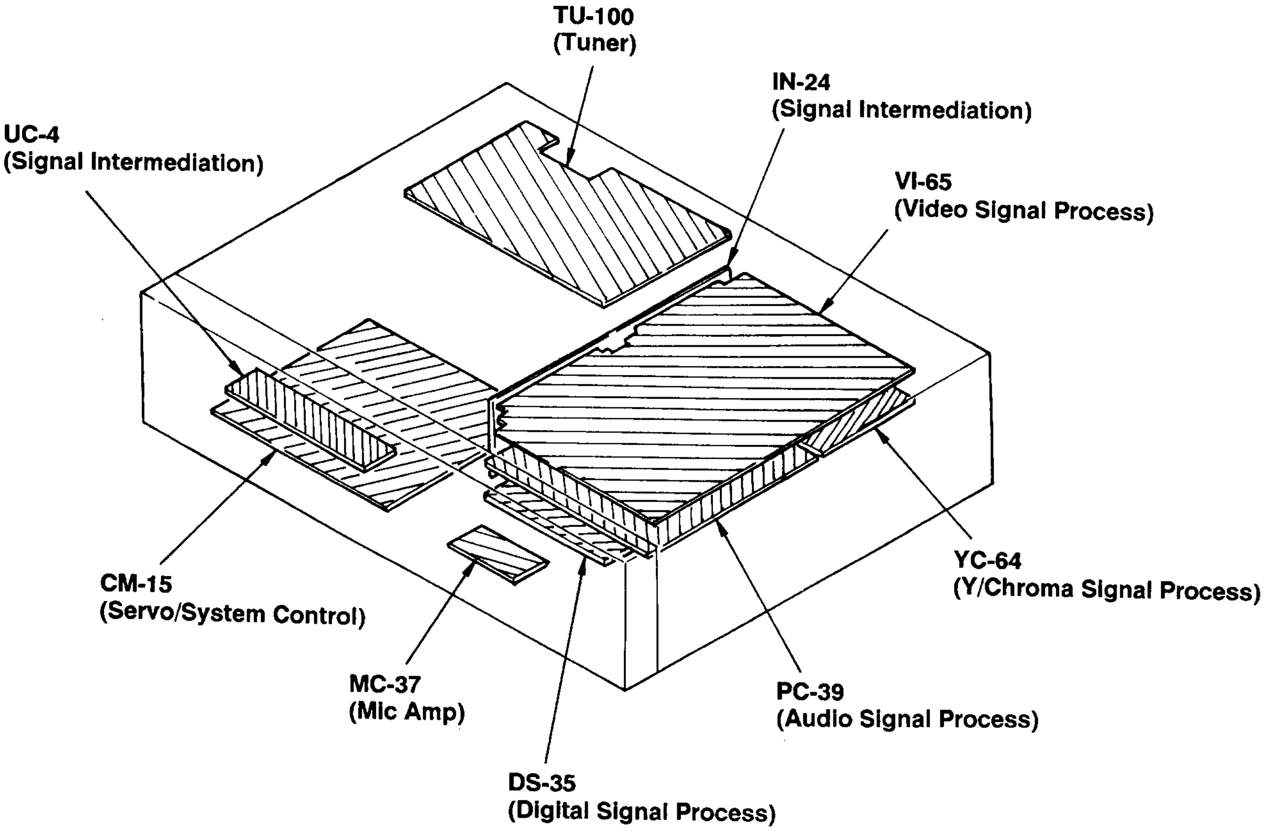
**Note:** Follow the disassembly procedure in the numerical order given.

## 2-1. (3-7.) REMOVAL OF RJ-5, RJ-6, FE-17, REAR FRAME, AND RF MODULATOR

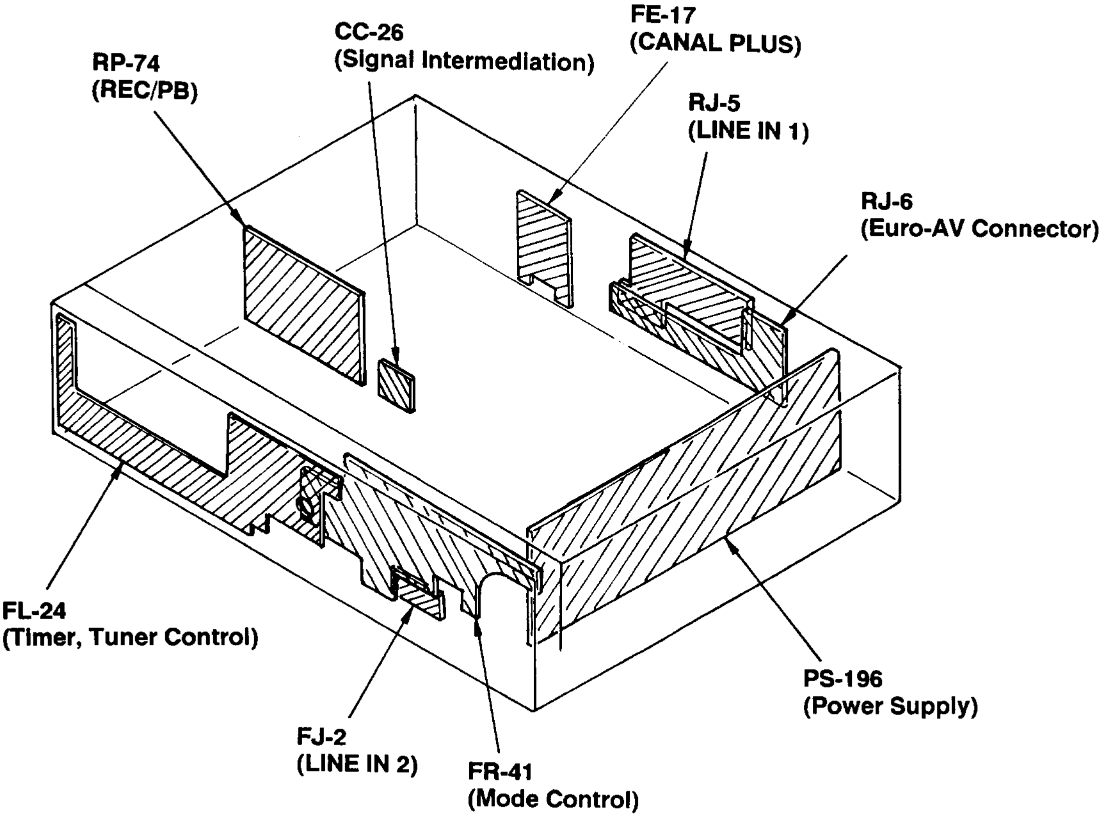

FE-17
RF modulator
RJ-5, RJ-6 board
❷ Screw (3 × 8)
❶ Screw (3 × 8)
❷ Screw (3 × 8)
❷ Screw (2.6 × 6)
❶ Screw (3 × 8)
❷ Screw (3 × 8)
❷ Screw (2 × 4.5)
❷ Screw (3 × 8)
❶ Screw (3 × 8)
❶ Screw (3 × 8)

# SECTION 3
# DIAGRAMS

## 3-1. (4-1.) CIRCUIT BOARDS LOCATION


TU-100
(Tuner)
IN-24
(Signal Intermediation)
UC-4
(Signal Intermediation)
VI-65
(Video Signal Process)
YC-64
(Y/Chroma Signal Process)
CM-15
(Servo/System Control)
MC-37
(Mic Amp)
PC-39
(Audio Signal Process)
DS-35
(Digital Signal Process)

FE-17 (CANAL PLUS)


RP-74
(REC/PB)
CC-26
(Signal Intermediation)
FE-17
(CANAL PLUS)
RJ-5
(LINE IN 1)
RJ-6
(Euro-AV Connector)
FL-24
(Timer, Tuner Control)
PS-196
(Power Supply)
FJ-2
(LINE IN 2)
FR-41
(Mode Control)

## 3-3. (4-11.) TIMER/TUNER CONTROL PERIPHERAL CIRCUIT INTERFACE (IC005 ON FL-24 BOARD)

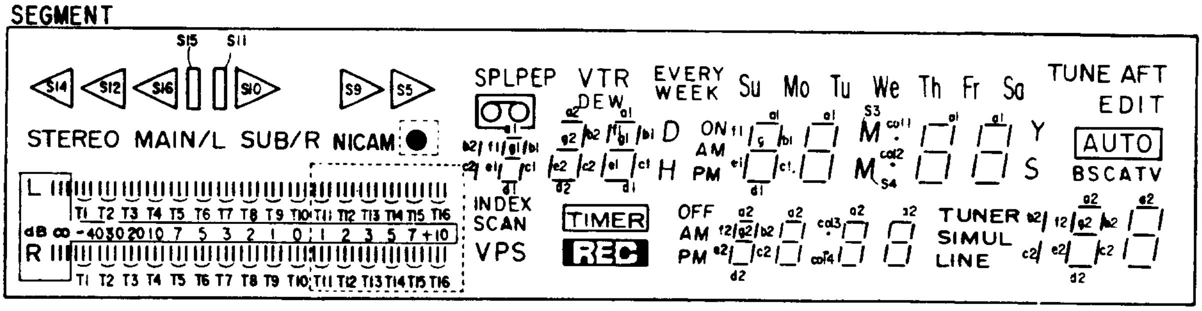
<table>
<tr><th>SIGNAL</th><th>I/O</th><th>Pin No.</th><th>INPUT OUTPUT LEVEL</th></tr>
<tr><td>AD0</td><td>I</td><td>(100) Pin</td><td rowspan="6">
<table>
<tr><th></th><th>0V</th><th>1</th><th>1.6</th><th>2.3</th><th>2.9</th><th>3.6</th><th>4.3</th></tr>
<tr><td>AD0</td><td>EJECT</td><td>STOP</td><td>PB</td><td>REC</td><td>A INS</td><td></td><td></td></tr>
<tr><td>AD1</td><td>FF</td><td>REW</td><td>PAUSE</td><td>INDEX</td><td>MARK</td><td>ERASE</td><td></td></tr>
<tr><td>AD2</td><td>CH +</td><td>CH −</td><td>T. REC</td><td>QUICK TIMER</td><td>EDIT</td><td>TIMED CHECK</td><td>TEST 2</td></tr>
<tr><td>AD3</td><td>INPUT SELECT</td><td>EDIT MONITOR</td><td>SYNCRO EDIT</td><td>SP/LP</td><td>COUNTER RESET</td><td>AUDIO M1</td><td>AUDIO M2</td></tr>
<tr><td>AD4</td><td>HI 8</td><td>TV/VTR</td><td>PLAYER</td><td>RECORDER</td><td>EDIT STANBY</td><td>X120</td><td>TEST 1</td></tr>
<tr><td>AD5</td><td>SERVICE</td><td></td><td></td><td></td><td></td><td>REMOCON 1</td><td>REMOCON 2</td></tr>
</table>
<table>
<tr><th></th><th>PCM</th><th>MIX</th><th>STD</th></tr>
<tr><td>AUDIO M1</td><td>×</td><td>○</td><td>×</td></tr>
<tr><td>AUDIO M2</td><td>×</td><td>×</td><td>○</td></tr>
</table>
<table>
<tr><th></th><th>VTR1</th><th>VTR2</th><th>VTR3</th></tr>
<tr><td>REMOCON 1</td><td>○</td><td>×</td><td>×</td></tr>
<tr><td>REMOCON 2</td><td>×</td><td>○</td><td>×</td></tr>
</table>
</td></tr>
<tr><td>AD1</td><td>I</td><td>① Pin</td></tr>
<tr><td>AD2</td><td>I</td><td>② Pin</td></tr>
<tr><td>AD3</td><td>I</td><td>③ Pin</td></tr>
<tr><td>AD4</td><td>I</td><td>④ Pin</td></tr>
<tr><td>AD5</td><td>I</td><td>⑤ Pin</td></tr>
<tr><td>E CS</td><td>O</td><td>⑰ Pin</td><td>“H” pulse on the channel selection.</td></tr>
<tr><td>E CLK</td><td>O</td><td>⑱ Pin</td><td>Pulse train when Pin ⑰ is “H”.</td></tr>
<tr><td>E DATA</td><td>I/O</td><td>⑲ Pin</td><td>Pulse train I/O when Pin ⑰ is “H”.</td></tr>
<tr><td>E BUSY</td><td>I</td><td>⑳ Pin</td><td>“L” pulse during Data writing.</td></tr>
<tr><td>VTR/$\overline{\text{TV}}$</td><td>O</td><td>㉑ Pin</td><td>“L” when the antenna selector is TV.</td></tr>
<tr><td>IN SEL 1</td><td>O</td><td>㉒ Pin</td><td>“H” when selecting LINE input on rear.</td></tr>
<tr><td>IN SEL 2</td><td>O</td><td>㉓ Pin</td><td>“H” when selecting LINE input on front.</td></tr>
<tr><td>POWER CONT</td><td>O</td><td>㉗ Pin</td><td>“H” when the power is on.</td></tr>
<tr><td>$\overline{\text{POWER FAIL}}$</td><td>I</td><td>㉟ Pin</td><td>“L” when UN 5V is 4.0 – 4.3V or less.</td></tr>
<tr><td>$\overline{\text{TT CS}}$</td><td>I</td><td>㊱ Pin</td><td>1V cycle “L” pulse.</td></tr>
<tr><td>$\overline{\text{TU V DET}}$</td><td>I</td><td>㊳ Pin</td><td>“L” during TUNER VIDEO receiving.</td></tr>
<tr><td>$\overline{V_L}$</td><td>O</td><td>㊷ Pin</td><td>“L” on receiving TUNER $V_L$.</td></tr>
<tr><td>WG/$\overline{\text{UK}}$</td><td>I</td><td>㊸ Pin</td><td>“H” for AEP model, “L” for UK model. Pull up to “H”.</td></tr>
<tr><td>SECAM/$\overline{\text{PAL}}$</td><td>O</td><td>㊹ Pin</td><td>“H” on receiving System L, “L” on system B/G.</td></tr>
<tr><td>TA MUTE</td><td>O</td><td>㊺ Pin</td><td>“H” pulse when the channel selection.</td></tr>
<tr><td>N. C</td><td>I</td><td>㊻ Pin</td><td>Not used</td></tr>
<tr><td>N. C</td><td>I</td><td>㊼ Pin</td><td>Not used</td></tr>
<tr><td>LATCH</td><td>O</td><td>㊾ Pin</td><td>“H” pulse when the channel selection.</td></tr>
<tr><td>CLOCK</td><td>O</td><td>㊿ Pin</td><td>Pulse train when Pin ㊾ is “H”.</td></tr>
<tr><td>DATA</td><td>O</td><td>(51) Pin</td><td>Pulse train when Pin ㊾ is “H”.</td></tr>
</table>

## FL-24 (TIMER, TUNER CONTROL) PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAM

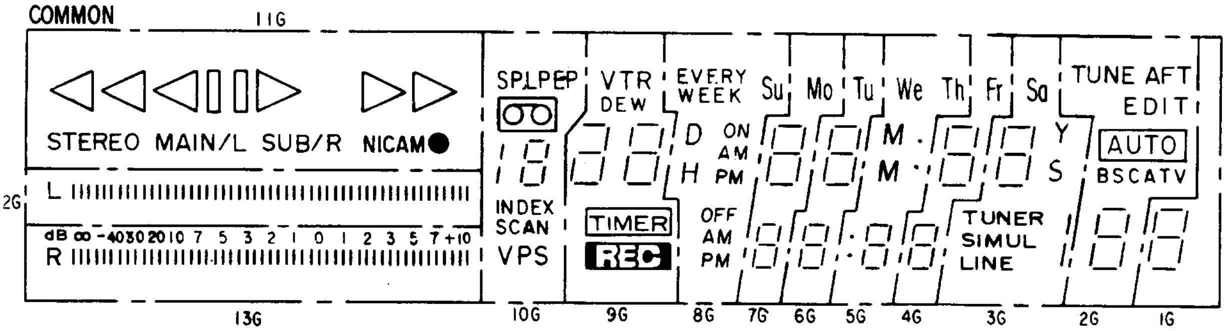
– Ref. No.: FL-24 Board; 11,000 Series –

- **ND001**

SEGMENT


S15
S11
S14
S12
S16
S10
S9
S5
STEREO MAIN/L SUB/R NICAM
SPLPEP
VTR
DEW
EVERY WEEK
Su Mo Tu We Th Fr Sa
TUNE AFT
EDIT
AUTO
BSCATV
D
H
ON
AM
PM
M
S3
S4
Y
S
L
R
dB ∞ -40 30 20 10 7 5 3 2 1 0 1 2 3 5 7 +10
T1 T2 T3 T4 T5 T6 T7 T8 T9 T10 T11 T12 T13 T14 T15 T16
INDEX
SCAN
VPS
TIMER
REC
OFF
AM
PM
TUNER
SIMUL
LINE

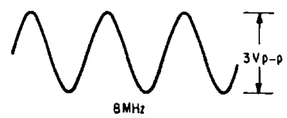
COMMON


11G
2G
13G
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G
STEREO MAIN/L SUB/R NICAM
L
R
dB ∞ -40 30 20 10 7 5 3 2 1 0 1 2 3 5 7 +10
SPLPEP
VTR
DEW
EVERY WEEK
Su Mo Tu We Th Fr Sa
TUNE AFT
EDIT
AUTO
BSCATV
INDEX
SCAN
VPS
TIMER
REC
D
H
ON
AM
PM
OFF
AM
PM
M
M
Y
S
TUNER
SIMUL
LINE

INTERNAL CONNECTION

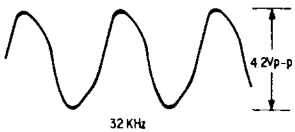
| | 11G | 10G | 9G | 8G | 7G | 6G | 5G | 4G | 3G | 2G | 1G |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S1 | STEREO | EP | VTR | EVERY WEEK | Mo | Tu | We | Fr | Sa | TUNE | |
| S2 | MAIN | a1 | a1 | Su | a1 | a1 | Th | a1 | a1 | AFT | |
| S3 | L | b1 | b1 | D | b1 | b1 | **M** Up | b1 | b1 | EDIT | |
| S4 | **NICAM** | c1 | c1 | H | c1 | c1 | **M Down** | c1 | c1 | | |
| S5 | ▷ **R** | d1 | d1 | | d1 | d1 | • co14 | d1 | d1 | CATV | |
| S6 | ● | e1 | e1 | PM | e1 | e1 | • co13 | e1 | e1 | AUTO | |
| S7 | SUB | f1 | f1 | ON | f1 | f1 | • co11 | f1 | f1 | | |
| S8 | R | g1 | g1 | AM | g1 | g1 | • co12 | g1 | g1 | | |
| S9 | ▷ **M** | | | | | | | | Y | BS | |
| S10 | ▷ **L** | OO | g2 | | a2 | a2 | a2 | a2 | S | a2 | a2 |
| S11 | ▯ **R** | SP | b2 | | b2 | b2 | b2 | b2 | b2. c2 | b2 | b2 |
| S12 | ◁ **M** | VPS | c2 | OFF | c2 | c2 | c2 | c2 | TUNER | c2 | c2 |
| S13 | | LP | DEW | PM | d2 | d2 | d2 | d2 | LINE | d2 | d2 |
| S14 | ◁ **L** | b2. c2 | e2 | AM | e2 | e2 | e2 | e2 | SIMUL | e2 | e2 |
| S15 | ▯ **L** | INDEX | TIMER | | f2 | f2 | f2 | f2 | | f2 | f2 |
| S16 | ◁ **R** | SCAN | REC | | g2 | g2 | g2 | g2 | | g2 | g2 |

❶



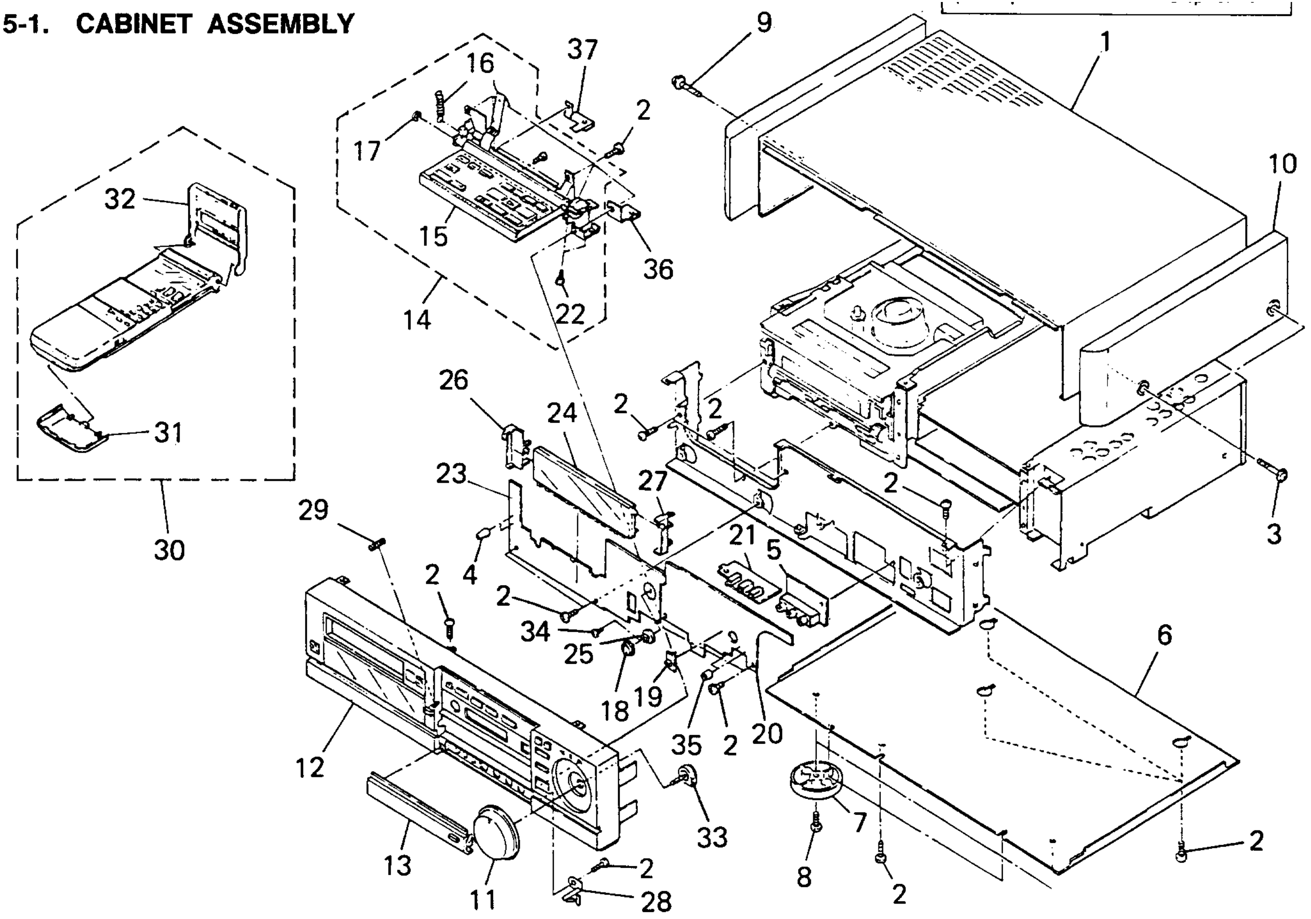
IC005 ⑬ REC / PB

❷

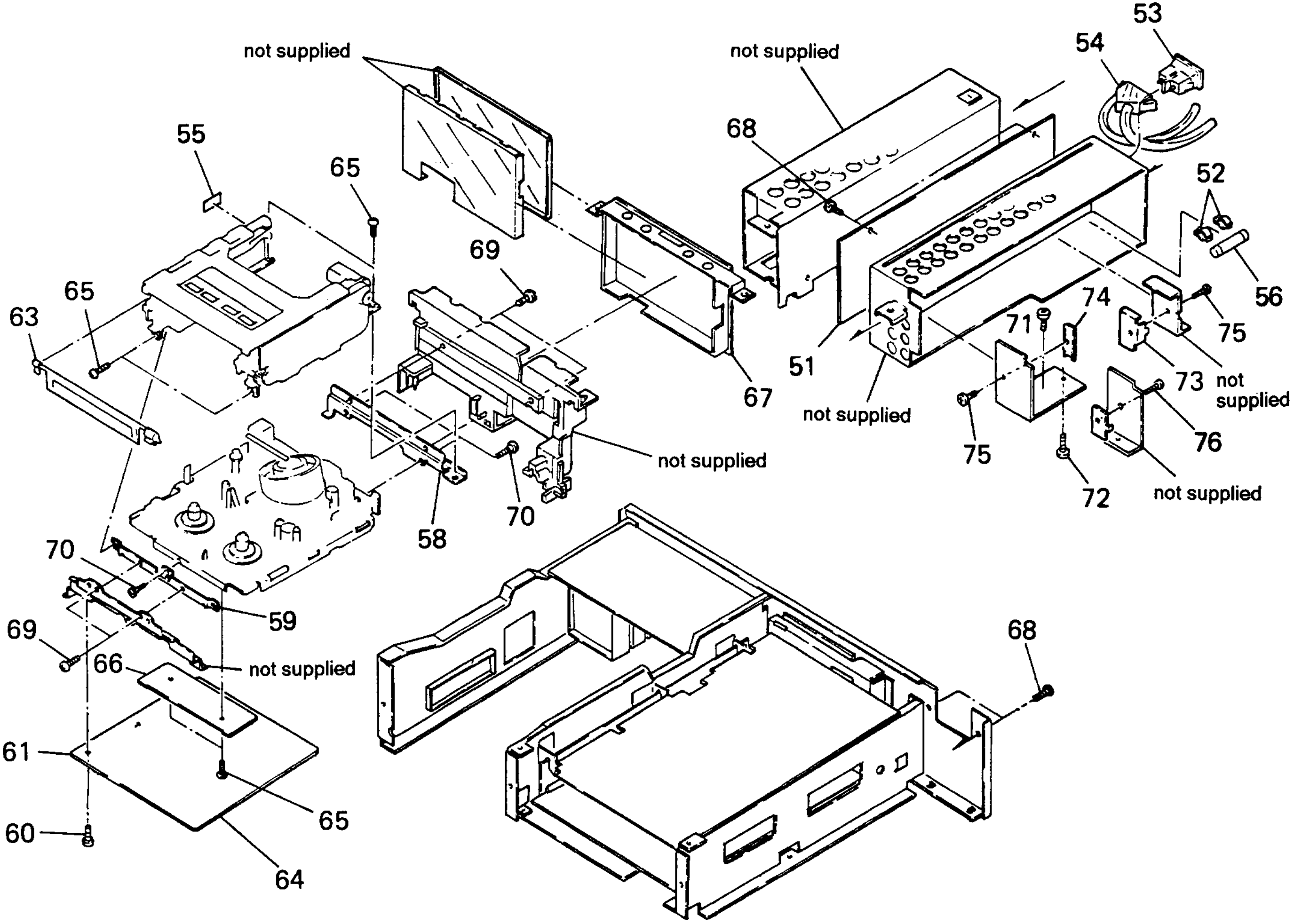


IC005 ⑩ REC / PB

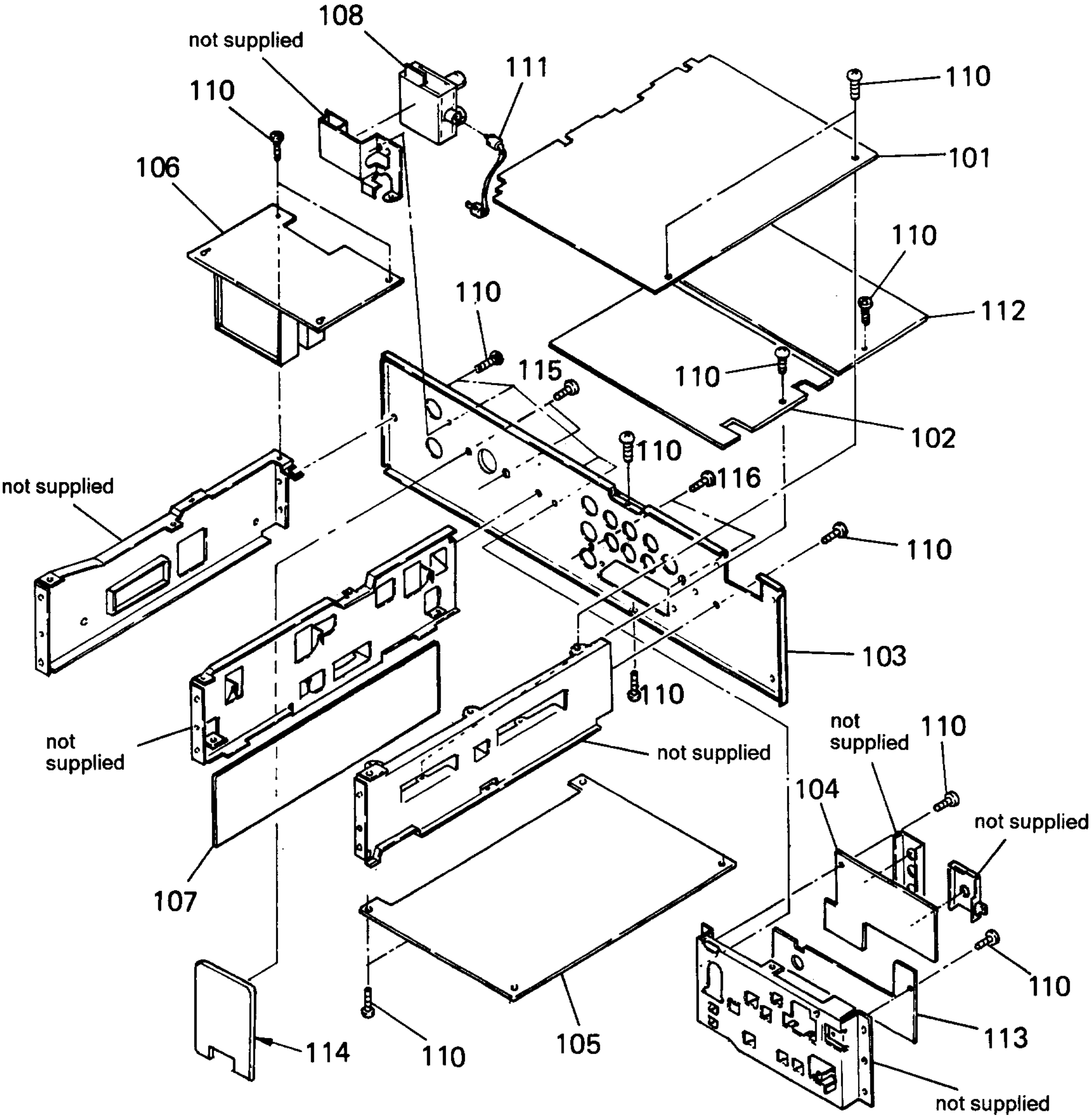
## 5-1. CABINET ASSEMBLY


9
1
37
16
2
17
32
15
36
10
22
14
31
26
24
2
2
23
27
2
3
29
21
5
30
2
4
2
6
34
25
18
19
12
35
2
20
33
7
2
13
11
2
28
8
2

## 5-2. MAIN CHASSIS ASSEMBLY


53
54
not supplied
not supplied
68
55
65
52
69
56
65
63
71
74
75
51
67
73
not supplied
not supplied
76
75
not supplied
72
70
58
not supplied
70
59
69
68
66
not supplied
61
65
60
64

## 5-3. MAIN BOARD ASSEMBLY


108
not supplied
111
110
110
101
106
110
110
112
115
110
102
110
not supplied
116
110
103
110
not supplied
supplied
not supplied
not
supplied
110
104
not supplied
107
110
113
114
110
105
not supplied

# SECTION 7
# ELECTRICAL ADJUSTMENT

## 7-1. (9-9.) TUNER SYSTEM ADJUSTMENT

### 7-1-1. (9-9-1.) RF AGC Adjustment (IF001 Unit/TU-100 Board)

| | |
|---|---|
| Signal | Broadcast TV signal |
| Adjustment element | VR of IF001 unit |

**[Adjustment Method]**

1) Adjust the monitor TV to a maximum contrast.
2) Turn the VR to make snow noise visible.
3) Turn the VR in an opposite direction and set it to the point where the snow noise disappears.
4) Receive each channel and confirm that there are no beat picture corruption snow noises due to cross modulation.

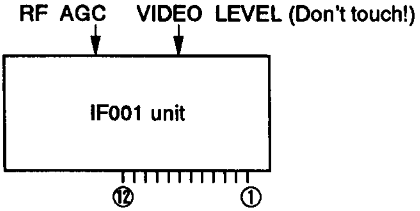
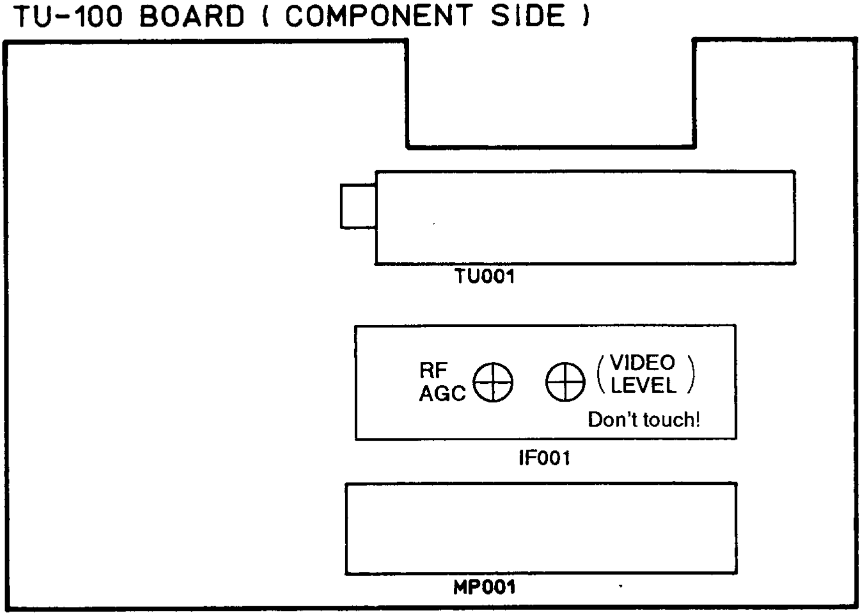


**Fig. 8-28.**

**Note:** Don't touch the video level volume.
When rotating it, feed the SECAM 97% modulated video signal, and adjust with the video level volume so that the video level at pin ⑫ VIDEO DET OUT becomes 2 Vp-p.

## 7-2. (9-10.) ARRANGEMENT DIAGRAM FOR ADJUSTING PARTS


TU-100 BOARD ( COMPONENT SIDE )
TU001
RF AGC
( VIDEO LEVEL )
Don't touch!
IF001
MP001

# EV-S1000E
## RMT-451

# SERVICE MANUAL

*AEP Model*
*UK Model*

Hi8

V MECHANISM

**For Mechanical ADJUSTMENTS, refer to the "8 mm Video MECHANICAL ADJUSTMENT MANUAL III" (9-972-732-11)**

## SPECIFICATIONS

### System

| | |
|---|---|
| Video recording system | Rotary two-head helical scanning FM system |
| Audio recording system (Normal recording) | **Standard:** Rotary head FM system (2 channels)<br>**PCM:** PCM system (2 channels) |
| Colour system | **EV-S1000E:** DDR SECAM to PAL colour, convertible<br>**EV-S1000E (UK):** CCIR system B, G, and H, PAL colour |
| Usable cassettes | 8 mm video format cassette |
| Tape speed | **SP:** 20.051 mm/sec.<br>**LP:** 10.058 mm/sec. |
| Maximum recording/playback time | **SP:** 1 hour 30 min. (with Sony E5/P5-90)<br>**LP:** 3 hours (with Sony E5/P5-90) |
| Fast-forward/rewind time | Approx. 4 min. (with Sony E5/P5-90) |

### PCM

| | |
|---|---|
| Sampling frequency | 31.25 kHz |
| Audio frequency | 20 Hz to 15 kHz |
| Dynamic range | More than 90 dB |
| Wow and flutter | Less than 0.005 % RMS |

### Tuner Section

| | |
|---|---|
| Channel coverage | **EV-S1000E:** VHF E2 to E4, E5 to E12<br>UHF E21 to E69<br>Cable TV channels S01 to S03, S1 to S20, S21 to S41<br>**EV-S1000E (UK):** UHF B21 to B68 |
| Programming system | 60 programmes |
| Stereo/bilingual system | **EV-S1000E:** West German two-carrier system<br>**EV-S1000E (UK):** NICAM |
| RF output signal | **EV-S1000E:** UHF channels E30 — E39 (variable)<br>**EV-S1000E (UK):** UHF channels B30 — B39 (variable)<br>75 ohms, unbalanced |
| Aerial input | 75-ohms asymmetrical aerial socket |

– Continued on page 2 –

- **SERVICE OF REMOTE COMMANDER RMT-451**

Remote commander RMT-451 is available as a unit. But as individual parts the battery case lid of commander is only available.

8 VIDEO CASSETTE RECORDER

SONY®

MICROFILM

## Inputs and Outputs

| | |
|---|---|
| **LINE IN 1/2** | **VIDEO**: Phono jack (1 each)<br>1 Vp-p, 75 ohms, unbalanced, sync negative<br>**AUDIO**: Phono jack (2 each)<br>47 kilohms, −7.5 dBs (0 dBs = 0.775 V rms)<br>**S VIDEO**: 4-pin mini DIN (1 each)<br>Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative<br>Chrominance signal: 0.30 Vp-p, 75 ohms, unbalanced |
| **LINE OUT** | **VIDEO**: Phono jack (1)<br>1 Vp-p, 75 ohms, unbalanced, sync negative<br>**AUDIO**: Phono jack (2 each)<br>Output impedance less than 1 kilohms, −7.5 dBs with 10 kilohms load unbalanced<br>**S VIDEO**: 4-pin mini DIN (1)<br>Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative<br>Chrominance signal: 0.30 Vp-p, 75 ohms, unbalanced |
| **MONITOR OUT** | **EURO-AV**: 21-pin (1)<br>Video out: pin 19<br>1 Vp-p, 75 ohms, unbalanced, sync negative (with change-over switch)<br>Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative<br>Chrominance signal:<br>PIN 15 0.30 Vp-p, 75 ohms, unbalanced<br>PIN 21 S VIDEO/VIDEO: S VIDEO<br>Audio out: pins 1 and 3<br>Output impedance Less than 1 kilohms, −6dBs with 10 kilohms load, unbalanced<br>**S VIDEO**: 4-pin, mini DIN (1)<br>Luminance signal: 1 Vp-p, 75 ohms, unbalanced, sync negative<br>Chrominance signal: 0.30 Vp-p, 75 ohms, unbalanced |
| **CONTROL L (LANC):** | Rear panel: 5-pin DIN (1)<br>Front panel: stereo miniminijack (1) |

| | |
|---|---|
| **HEADPHONES jack:** | Stereo minijack (1), −20 dBs, 8 ohms |
| **MIC (microphone) input:** | Minijack (1)<br>−60 dBs, for low impedance microphone |

## Timer Section

| | |
|---|---|
| **Clock** | Crystal locked |
| **Command mode** | VTR 1/2/3 |
| **Time indication** | 24-hour cycle |
| **Timer setting** | Only for recording<br>6 programmes in one month at max. |
| **Timer back-up** | Built-in self-charging capacitor<br>Back-up duration: Up to 1 hour at one time |

## General

| | |
|---|---|
| **Power requirements** | **EV-S1000E:** 220 V AC, 50 Hz<br>**EV-S1000E (UK):** 240 V AC, 50 Hz |
| **Power consumption** | **EV-S1000E:** 28 W<br>**EV-S1000E (UK):** 30 W |
| **Operating temperature** | 5°C to 40°C (41°F to 104°F) |
| **Storage temperature** | −20°C to 60°C (−4°F to 140°F) |
| **Dimensions** | **EV-S1000E:** 470 x 105 x 305 mm (w/h/d)<br>(18 5/8 x 4 1/4 x 12 1/8 inches)<br>(including side woods)<br>**EV-S1000E (UK):** 430 x 105 x 305 mm (w/h/d)<br>(17 x 4 1/4 x 12 1/8 inches) |
| **Weight** | **EV-S1000E:** 6.5 kg (14 lb 5 oz)<br>**EV-S1000E (UK):** 5.9 kg (13 lb) |

## Wireless Commander RMT-451

| | |
|---|---|
| **Remote control system** | Infrared control |
| **Power requirements** | 3.0 V DC, two IEC designation R6 batteries |
| **Command mode** | VTR 1/VTR 2/VTR 3 |
| **Dimensions** | Approx. 77 x 18 x 220 mm (w/h/d)<br>(3 1/8 x 3/4 x 8 3/4 inches)<br>including projecting parts and controls |
| **Weight** | 170 g (5 oz) excluding batteries |

## Accessories Supplied

| | |
|---|---|
| Wireless Remote Commander RMT-451 with two R6 batteries | (1) |
| 75-ohm coaxial cable | (1) |
| Audio connecting cable (2 phono to 2 phono) | (1) |
| Video connecting cable (phono to phono) | (1) |
| Video connecting cable for S VIDEO connector (4-pin DIN to 4-pin DIN) | (1) |
| Control cable (stereo minimini jack to stereo minimini jack) | (1) |
| Screwdriver | (1) |
| Cleaning cassette | (1) |

Design and specifications are subject to change without notice.

**Note**
This appliance conforms with EEC Directives 76/889 and 82/499 regarding interference suppression.

## SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

**SAFETY-RELATED COMPONENT WARNING!!**

**COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

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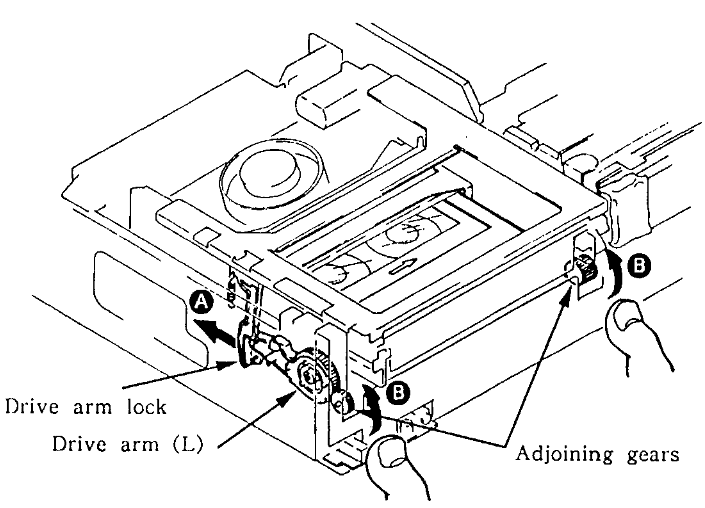
# SECTION 1
# SERVICE NOTE

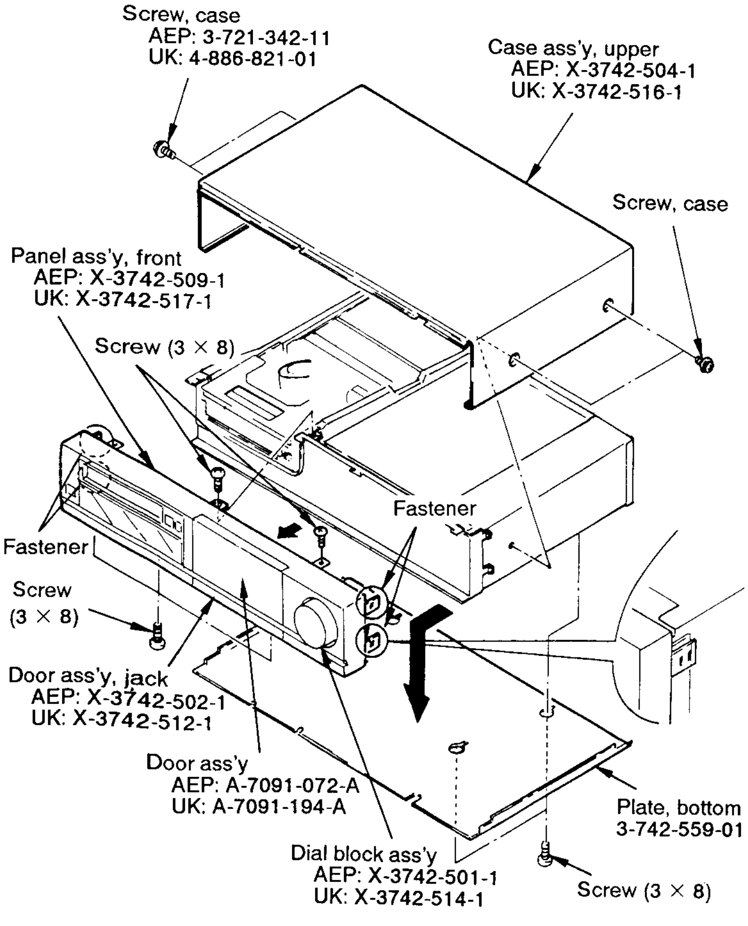
## 1-1. Ejecting a malfunctioning videocassette

A. If the videocassette cannot be ejected because the videotape is still wrapped around the drum, remove the CM-15 board on the lower part of the mechanical section. Turn the capstan motor wheel in either direction and turn either the S or T reel to return the tape to the cassette. After the tape is back inside the cassette, proceed to step "B" if necessary.

B. If the videotape is in the cassette half and cannot be ejected :
   1) Remove the front panel. Remove the drive arm lock (located between the L frame and the left part of the cassette control section) away from the drive arm (L) in the direction of the arrow Ⓐ.
   2) Use both thumbs to turn the adjoining gears in the direction of arrow Ⓑ.


Ⓐ
Ⓑ
Ⓑ
Drive arm lock
Drive arm (L)
Adjoining gears

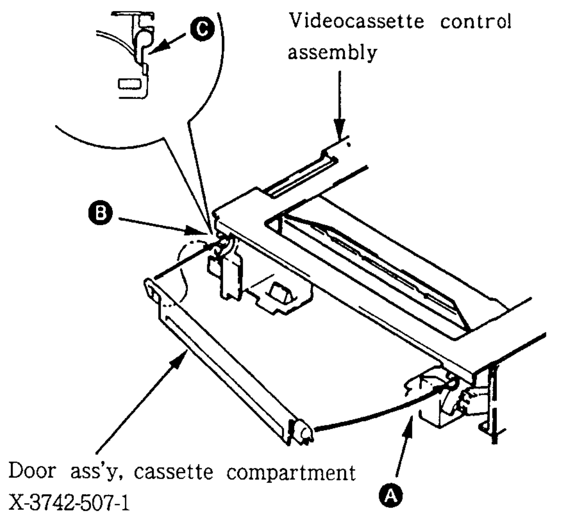
## 1-2. Replacing the external casing


Screw, case
AEP: 3-721-342-11
UK: 4-886-821-01
Case ass'y, upper
AEP: X-3742-504-1
UK: X-3742-516-1
Screw, case
Panel ass'y, front
AEP: X-3742-509-1
UK: X-3742-517-1
Screw (3 × 8)
Fastener
Fastener
Screw
(3 × 8)
Door ass'y, jack
AEP: X-3742-502-1
UK: X-3742-512-1
Door ass'y
AEP: A-7091-072-A
UK: A-7091-194-A
Plate, bottom
3-742-559-01
Dial block ass'y
AEP: X-3742-501-1
UK: X-3742-514-1
Screw (3 × 8)

Note: Remove the locks of the five fasteners, then remove the front panel.

## 1-3. Replacing the videocassette door assembly

1) Remove the front panel.
2) Remove the videocassette door assembly first from part Ⓐ, then from part Ⓑ.


Ⓒ
Videocassette control assembly
Ⓑ
Door ass'y, cassette compartment
X-3742-507-1
Ⓐ

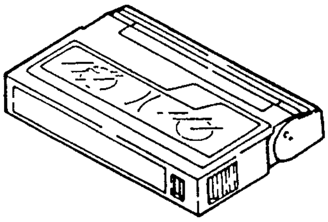
3) When reinstalling the videocassette door assembly, install at part Ⓑ first. Install it on the fastener of part Ⓒ as shown in the figure. Then install at part Ⓐ with the door assembly lowered vertically.

## 1-4. Cleaning the video head and transport system

### Procedure 1

**[Using a cleaning tape]**

- Use the V8-25CLN cleaning tape. (Before using the cleaning tape, read the instructions carefully.)



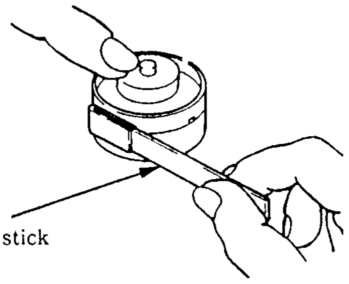
### Procedure 2

**[Using cleaning fluid]**

① Remove the video deck's upper casing.

② Apply the cleaning fluid to the head cleaner stick (Ref. No. 3-601-330-99).

③ As shown in the figure on the right, gently contact the head cleaner stick to the video head, and clean while turning the rubber part on the top of the rotating drum.



**[Cleaning the transport system]**

① Apply the cleaning fluid to the head cleaner stick.

② Use the head cleaner stick to clean the tape guide, pinch roller, and other parts that come in direct contact with the tape.

## 1-5. Notes for cassette compartment ass'y installation

1. After installing the cassette compartment ass'y onto the MD block ass'y, look from the front panel and check if the tab of the eject lever (MD block ass'y) is properly latched onto the rear of the knob of the lock slider (cassette compartment ass'y). See Fig. 1.
2. If the tab is latched on the reverse, use the tip of a screwdriver to lightly push the eject lever. Then install the cassette compartment ass'y.

**Notes**

1. When the MD block ass'y is not in the STOP position, the eject lever might not be able to move.
2. If the cassette compartment is not properly installed on the MD block ass'y (improper latching between the cassette compartment ass'y's lock slider and the MD block ass'y's eject lever) and the unit's AC plug is inserted into a power outlet, the cassette door and holder will operate repeatedly regardless of the ON/OFF setting of the power switch. The cassette will not be loaded even when it is inserted.

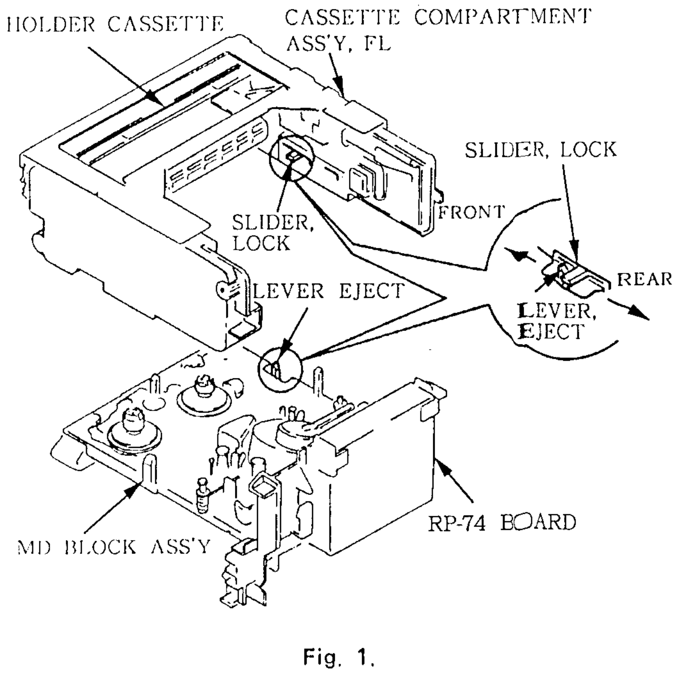


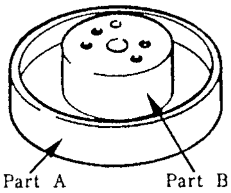
Fig. 1.

# 1-6. Replacing the rotating drum

## Procedure 3

### Precautions

- Be especially careful when handling the video head and terminals.
- Hold the drum by the upper part (Part B), do not touch the side of the drum (Part A) directly. See Fig. 1.

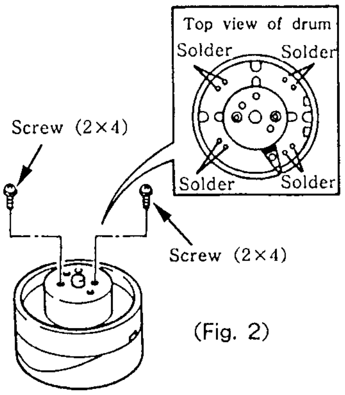

Part A
Part B

(Fig. 1)

### Removing the rotating drum

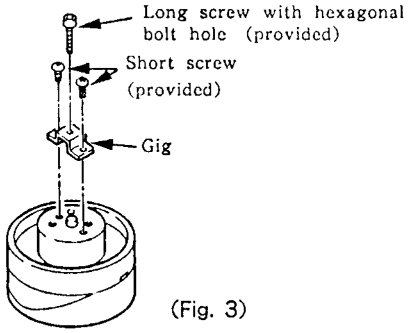
① As shown in Fig. 2, remove the two short screws (2×4).

② Completely remove the eight soldering points on the rotating drum's board. Refer to Fig. 2.


Top view of drum
Solder
Solder
Solder
Solder
Screw (2×4)
Screw (2×4)

(Fig. 2)

③ While referring to Fig. 3, use the two short screws supplied with the jig (which comes with the spare rotating drum) to fasten the jig to the drum. Then screw in the long screw until the drum is removed.

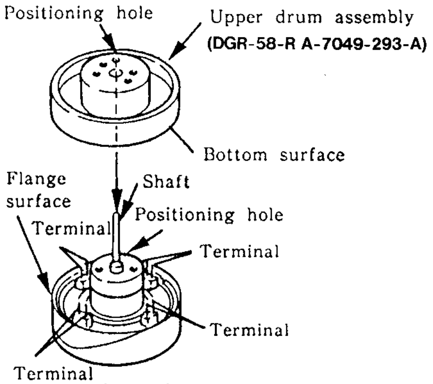

Long screw with hexagonal bolt hole (provided)
Short screw (provided)
Gig

(Fig. 3)

### Installing the new drum

① Clean the flange surface and the new rotating drum's bottom surface. Refer to Fig. 4.

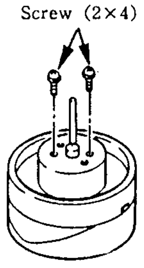
② While referring to Fig. 4, insert the supplied shaft through the jig and into the positioning hole of the lower drum. Slip the shaft into new rotating drum's positioning hole and gently set the rotating drum.


Positioning hole
Upper drum assembly
(DGR-58-R A-7049-293-A)
Bottom surface
Flange surface
Shaft
Positioning hole
Terminal
Terminal
Terminal
Terminal

(Fig. 4)

③ With the shaft still inserted in the positioning hole, use your hand to push down the rotating drum lightly. If the drum does not go down completely, refer to Fig. 5 and gradually tighten the two long screws (2×5) alternately to fasten the rotating drum.

④ Take out the shaft. If the shaft cannot be readily taken out, redo the procedure from step 2.



(Fig. 5)

⑤ While referring to Fig. 2, solder the board's eight places and eight terminals.

⑥ After the rotating drum is replaced, use a head cleaner stick to clean the video head and transport system. Follow Procedure 2 of "Cleaning the video head and transport system."

# SECTION 2
# GENERAL

This section is extracted from instruction manual.

## Precautions

### On Safety

- For EV-S1000E (UK), operate on 240 V AC, 50 Hz. For EV-S1000E, operate on 220 V AC, 50 Hz.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- If the unit will not be used for an extended period, unplug it from the mains outlet. To disconnect the cord, pull it out by the plug. Never pull the lead itself.
- The unit is not disconnected from the mains (AC power source) as long as it is connected to the mains outlet, even if the unit itself has been turned off.

### On Installation

- Allow adequate air circulation to prevent internal heat build-up.
- Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies, etc.) that may block the ventilation holes.
- Do not install the unit near heat sources such as radiators or air ducts or in a place subject to direct sunlight, excessive dust, mechanical vibration or shock.
- The unit is designed for operation in a horizontal position. Do not install it in an inclined position.
- Keep the unit and cassette tapes away from equipment with strong magnets, such as microwave ovens or large loudspeakers.
- Do not place any heavy object on the unit.

### On Operation

- When the unit is not in use, turn the power off to conserve energy and to extend its life.
- Remove and store video cassettes after recording or playback.

### On Cleaning

- Clean the cabinet, panel and controls with a dry soft cloth, or a soft cloth slightly moistened with a mild detergent solution.
- Do not use any type of solvent, such as alcohol or benzine, which might damage the finish.

### On Repacking

- Do not throw away the carton and packing materials. They make an ideal container to transport the unit. When shipping the unit to another location, repack it as illustrated on the carton.

### On Cassette Care

- Store cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.

### On the Remote Controller

Be sure not to lose the Remote Commander. Some function of this VTR can not be performed without the Remote Commander.

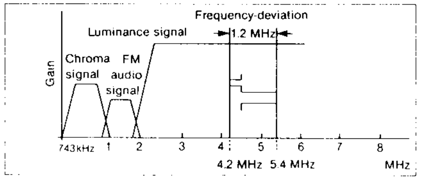
If you have any questions about the unit, contact your Sony service facility.

## Hi8 (High Eight) Video System

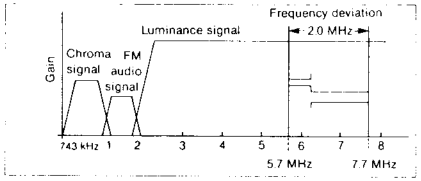
### High Quality Picture

Information capacity is the key element for picture improvement. It can be increased by shifting the FM carrier frequency range. In the Hi8 video system, the FM carrier frequency range of the luminance signal is shifted to 5.7 — 7.7 MHz, up from the 4.2 — 5.4 MHz of the standard 8 mm video system. Thanks to this improvement, the horizontal resolution is increased.

**Frequency allocation of the standard 8 mm video system**



**Frequency allocation of the Hi8 video system**



### High Grade Tape to Match the Hi8 Video System

Metal evaporated tapes have been developed exclusively for Hi8 recording. The high magnetic energy of the metal evaporated tape which allows for high-density recording, coupled with the Hi8 video recording technology will cover a wide frequency range to achieve recording of excellent picture quality.

### S VIDEO (Separated Luminance/Chrominance Signal) Input/Output Connectors

Conventional video equipment transmits or receives the composite video signal. The composite video signal is liable to produce interference resulting in picture quality loss. On the other hand, the S VIDEO connector transmits or receives the video signal separated into the luminance signal and the chrominance signal.
Flickers and colour blur in the picture are minimized with the separated video signals and picture sharpness is enhanced to such an extent that even hair and fine stripes are clearly visible.
The S VIDEO connector also assures minimum loss in picture quality during editing.

### Compatibility with a Standard 8 mm Video Cassette Recorder

Refer to the chart below for the compatibility between the Hi8 video system and the standard 8 mm system.

***Recording with this VTR***

| Tape used | Hi8 indicator | Recording system |
|---|---|---|
| Hi8 tape | On | Hi8 |
| | Off | Standard 8 mm video system |
| Standard 8 mm tape | Automatically turned off | Standard 8 mm video system |

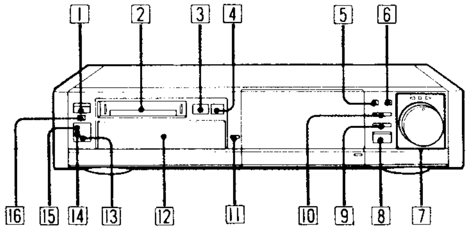
***Playback with this VTR***

| Tape used | Playback system |
|---|---|
| Tape recorded in Hi8 video system | The recording video system is automatically selected |
| Tape recorded in standard 8 mm video system | |

**Notes**

- Hi8 recording or playback can only be performed with a Hi8 tape.
- A standard 8 mm tape cannot be recorded or played back using the Hi8 video system.
- The recording tape speed of the Hi8 video system is compatible with the standard 8 mm video system. Recording/playback time is 1.5 hours in the SP mode and 3 hours in the LP mode using a P5/E5-90HME tape or equivalent.

# Operational Parts



## Front Panel

1 **ON/STANDBY switch**

2 **Cassette compartment**

3 **≙ EJECT button**

4 **Hi8 (Recording/playback) indicator**
Lights to indicate that Hi8 recording or playback can be performed.

5 **PLAYER control button**

6 **RECORDER control button**

7 **EDIT SHUTTLE (REVERSE/FORWARD) and indicator**

8 **SYNCHRO EDIT button and indicator**

9 **EDIT STANDBY button and indicator**

10 **EDIT MONITOR button and indicator**

11 **PUSH OPEN button**

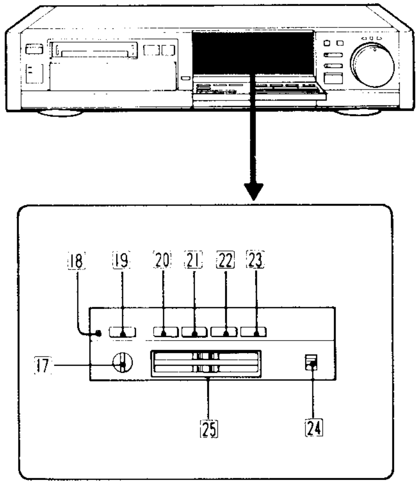
12 **Display window**

13 **Remote sensor**

14 **Hi-Fi STEREO indicator**
Lights when playing back the Hi-Fi audio track recorded in the bilingual or stereo mode. Also lights when recording is made in the bilingual or stereo mode on the Hi-Fi track.

15 **PCM indicaor**
Lights when recording on or playing back the PCM audio track.

16 **ON/STANDBY lamp [ for EV-S1000E (UK) only.]**
Lights when the VTR is in the standby mode.



17 **PHONE LEVEL (headphones level) control**

18 **Reset switch**
Press this switch with a pointed object such as a ball point pen if the VTR does not operate even when pressing the operating buttons. When this switch is pressed, the information entered to the VTR's memory will be lost. Reset the information before operating the VTR again.

19 **Hi8 mode button**

20 **COUNTER RESET button**

21 **TV/VTR button**

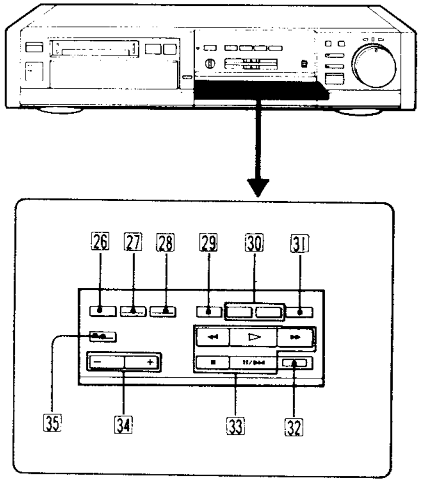
22 **REC MODE SP/LP button**

23 **INPUT SELECT button**

24 **AUDIO MONITOR select switch**
[PCM/MIX/STD (Hi-Fi)]

25 **REC LEVEL controls**

# Operational Parts



26 **TIMER CHECK button**

27 **TIMER REC ON/OFF button**

28 **QUICK TIMER button**

29 **INDEX button**

30 **INDEX MARK/ERASE buttons**

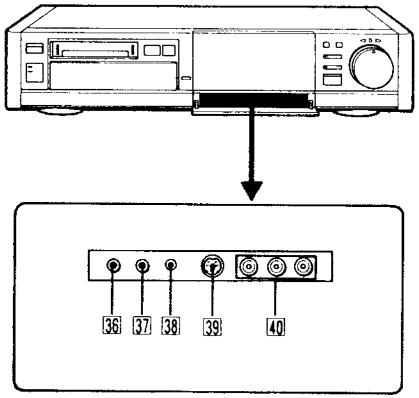
31 **EDIT button**

32 **● REC (recording) button**

33 **Tape transport buttons**
◄◄ REW (rewind), ▷ PLAY (playback), ►► FF (fast-forward), ■ STOP, ❚❚/►◄ PAUSE/STILL

34 **PROGRAM +/– buttons**

35 **AUDIO DUB button and indicator**



36 **HEADPHONES jack (stereo minijack)**

37 **MIC (microphone) jack (minijack)**

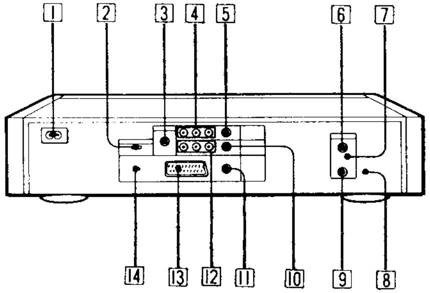
38 **CONTROL L (LANC) jack (stereo mini-minijack)**

39 **LINE IN 2 S VIDEO connector (4-pin DIN)**

40 **LINE IN 2 VIDEO/AUDIO jacks (phono)**
When connecting a monaural equipment to these jacks, connect to the LINE IN 2 AUDIO L (MONO) jack only.

**About LANC**
LANC stands for Local Application Control Bus System.
The LANC connector is used for controlling the tape transport of video equipment and peripherals connected to it. This connector has the same function as the connectors indicated as CONTROL L or REMOTE.

# Operational Parts



## Rear Panel

1 **AC INPUT**

2 **COMMAND MODE selector**

3 **CONTROL L (LANC) connector (5-pin DIN)**

4 **LINE IN 1 VIDEO/AUDIO jacks (phono)**

5 **LINE IN 1 S VIDEO connector (4-pin DIN)**

6 **AERIAL IN socket**

7 **DX/LOCAL switch**

8 **RF CHANNEL screw (30 CH to 39 CH)**

9 **AERIAL OUT socket**

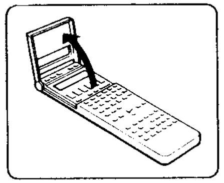
10 **LINE OUT S VIDEO connector (4-pin DIN)**

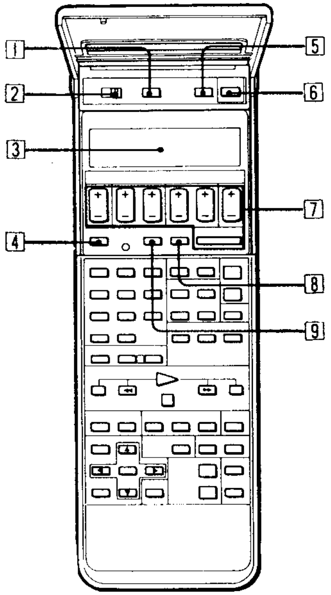
11 **MONITOR OUT S VIDEO connector (4-pin DIN)**

12 **LINE OUT VIDEO/AUDIO jacks (phono)**

13 **MONITOR OUT EURO-AV connector (21-pin CENELEC)**

14 **VIDEO OUT (VIDEO or S VIDEO) selector**





## Remote Commander RMT-451

***Before you begin***

- The buttons on the Commander with the same name or mark as those on the unit have the same function.
- The buttons with a red dot inscribed on top can be used to remotely control Sony TV's with the 🅁 mark when the TV/VTR remote control selector is set to TV.
- Keep the upper cover closed except where noted.

1 **TIMER REC (ON/OFF) button**

2 **TV/VTR remote control selector**
Set to VTR to control this VTR and set to TV to control the TV.

3 **LCD (Liquid-crystal) display**

4 **COMMAND MODE button**

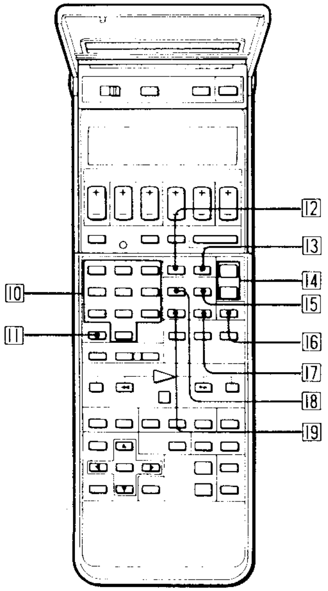
5 **TV/VTR button**

6 **⏻ (on/standby) button**

7 **Timer recording/clock set buttons**
❶ DAY
❷ TURN ON time
❸ TURN OFF time
❹ PROG (programme position)
❺ TRANSMIT

8 **MEMORY button**

9 **CLOCK SET (SET/START) button**



**10 Programme position number buttons**
Press to select the programme position directly. To enter single digit numbers, press 0 and then the desired number.

**11 – / – – (10's digit) button**
Press to select a programme position number over 9.
To select 23, press - / , then 2 and 3.

**12 INPUT SELECT button**
Open the cover to select the input signal for timer recording. Close the cover to change the current input setting.

**13 REC MODE select button**

**14 PROG (programme) + / – buttons**

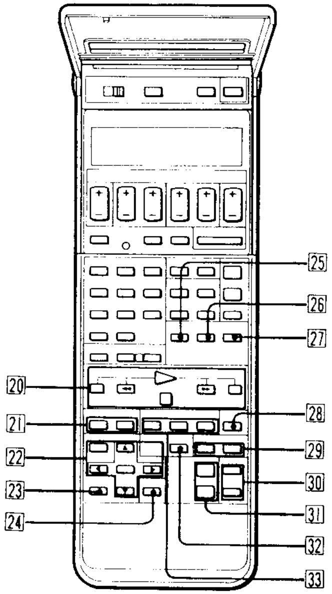
**15 MAIN/SUB button**

**16 INDEX button**

**17 COUNTER RESET button**

**18 DATA SCREEN button**

**19 EDIT MONITOR button**



**20 Basic operational buttons**
ıı PAUSE button
● REC (recording) buttons
⏪/⏩ SEARCH button
▷ PLAY
◀◀ REW (rewind)
▶▶ FF (fast-forward)
■ STOP

**21 SHUTTLE EDIT < / > buttons**

**22 Menu operation buttons**
MENU
EXECUTE
Cursor shift buttons ▲/▼/◀/▶

**23 FUNCTION MEMORY button**

**24 TIMER ON SCREEN button**

**25 ıı▶ FRAME button**

**26 X1/5 button**

**27 X2 button**
When this buttton is pressed, the playback sound will automatically be changed to monaural, even though the STEREO indicator will be turned on in the display window.

**28 TV SCAN button**

**29 INDEX MARK and ERASE button**

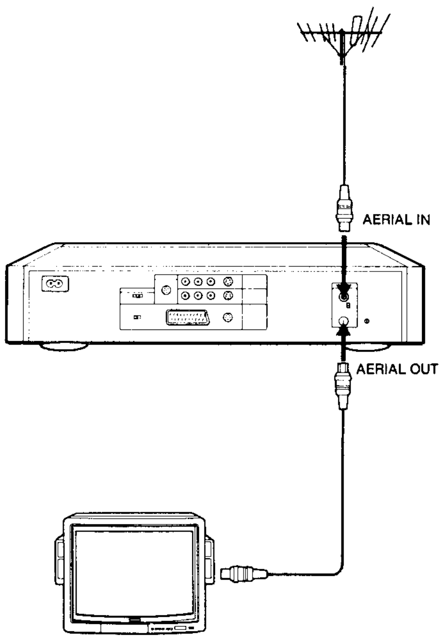
**30 TIMER CHECK/TIMER CLEAR buttons**

**31 VOL (TV volume) + / – buttons**
Press to control the volume of the TV. Effective only for Sony TVs with the 🅁 mark.

**32 AUDIO DUB button**

**33 P in P (picture in picture) buttons**

# Connections



### Before You Begin

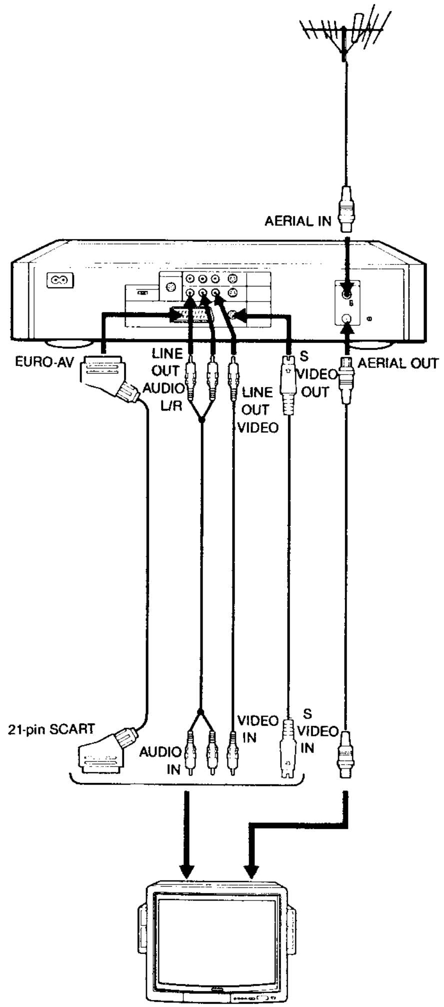
- Turn off the power to the unit and TV.
- Do not connect the mains lead until all of the other connections are complete.
- Connect firmly as a loose connection may cause picture distortion.

### To Connect a TV without Audio/video Inputs

1 Remove the aerial cable on the TV from its socket.

2 Connect the aerial cable to AERIAL IN on the VTR.

3 Connect the aerial input of the TV to AERIAL OUT on the VTR using the supplied cable.



### To Connect a TV with Audio/video Inputs

Connections using the audio/video inputs on the TV provide a better quality playback picture.

*If your TV is equipped with an EURO-AV connector*

1 **Follow steps 1 to 3 in "To Connect a TV without Audio/video Inputs."**

2 **Connect LINE OUT AUDIO/MONITOR OUT EURO-AV of the VTR to the audio input/ EURO-AV on the TV with an optional cable.**

3 **Set the VIDEO OUT (VIDEO or S VIDEO) selector on the rear panel to S VIDEO to view the picture of the Luminance and Chrominance separated signal, i.e. the same as the video signal output from the S VIDEO connector. Set it to VIDEO to output standard video signals.**

*If your TV is equipped with S VIDEO input connector*

1 **Follow steps 1 to 3 in "To Connect a TV without Audio/video Inputs."**

2 **Connect LINE OUT AUDIO/MONITOR OUT S VIDEO of the VTR to the AUDIO/S VIDEO input on the TV with the supplied cable.**

*If your TV is equipped with audio/video input jacks*

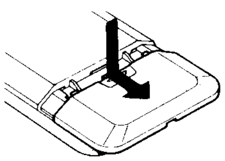
1 **Follow steps 1 to 3 in "To Connect a TV without Audio/video Inputs."**

2 **Connect LINE OUT AUDIO/VIDEO jacks on the VTR to the audio/video input jacks on the TV.**

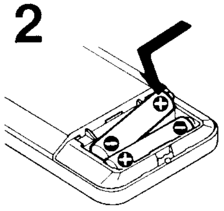
Notes
- If this VTR is connected to a TV or monitor which does not have S VIDEO input, and the VIDEO OUT (VIDEO or S VIDEO) selector is set to S VIDEO, picture will be displayed on the screen but without colour.
- Avoid making VIDEO and S VIDEO connections at the same time.
- The on-screen display will not be output to the TV if connection is made via LINE OUT AUDIO/VIDEO jacks.

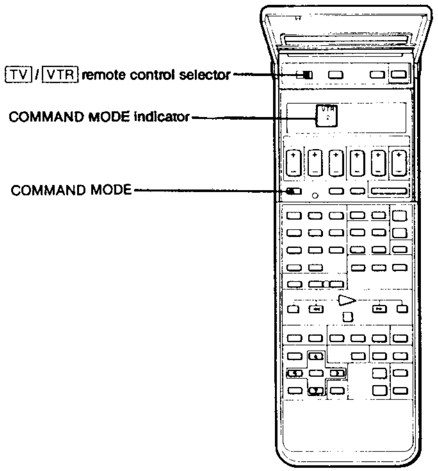
# Remote Control Operation

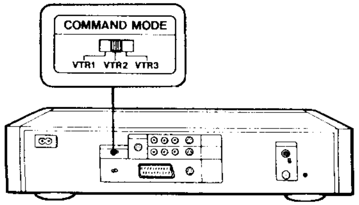
1



2




TV / VTR remote control selector
COMMAND MODE indicator
COMMAND MODE


COMMAND MODE
VTR1 VTR2 VTR3

### Preparing the Commander

*Battery insertion*

1 **Slide and remove the cover.**

2 **Insert two R6 (size AA) batteries with the correct polarity.**

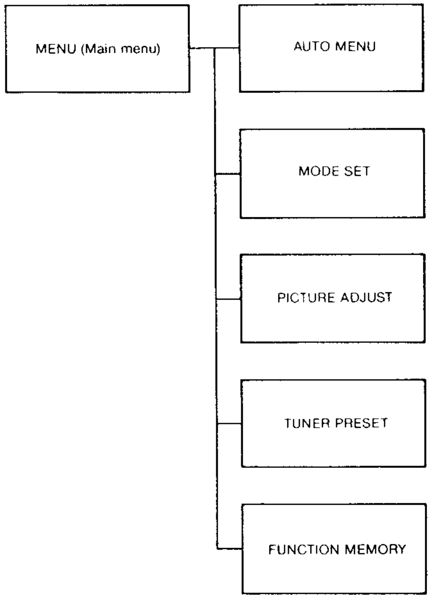
3 **Close the cover.**
The clock on the Commander will read – D – : – –. Set the date and clock referring to "Date and Clock Setting."

*Command mode setting*

Set the COMMAND MODE selector on the rear of this VTR to the same number displayed in the LCD display.
Normally set to VTR 2. To change the setting on the Commander, press COMMAND MODE repeatedly.

**Note on batteries**
With normal operation, batteries will last for about six months. If the Commander will not be used for a long period, remove the batteries to avoid possible damage from battery leakage.

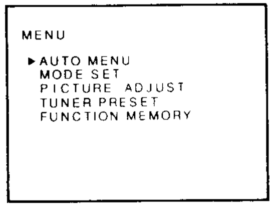
# The Menu System


MENU (Main menu)
AUTO MENU
MODE SET
PICTURE ADJUST
TUNER PRESET
FUNCTION MEMORY

### Overview

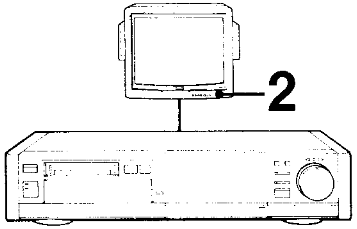
This VTR employs a menu system in which various settings and adjustments necessary for operation can be made. The menu system of this VTR consists of five different menu displays which can be selected from the main MENU.

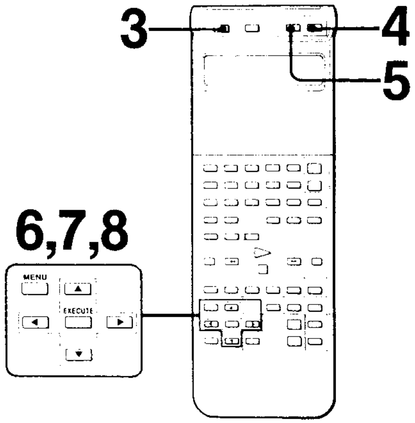
Refer to the following pages for the details of each menu.



```
MENU

▶AUTO MENU
 MODE SET
 PICTURE ADJUST
 TUNER PRESET
 FUNCTION MEMORY
```





### To Call Up the Menu Display

1 **Check that the VTR and the TV are connected properly.**
Connect the VTR and the TV using the AERIAL OUT socket, MONITOR OUT EURO-AV connector, or the MONITOR OUT S VIDEO connector on the VTR referring to "Connections."

2 **Turn on the TV.**
Select the programme position for VTR playback if connection is made using the AERIAL OUT socket on the VTR. Select VTR input if connection is made using the MONITOR OUT EURO-AV or S VIDEO connector.

3 **Set the TV/VTR remote control selector to VTR.**

4 **Press ON/STANDBY.**

5 **Press TV/VTR to turn on the VTR indicator.**
When connection is made via the AERIAL OUT socket on the VTR.

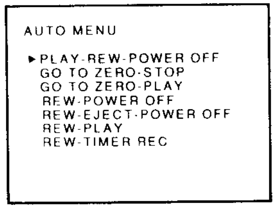
6 **Press MENU.**
The main MENU will appear on the screen.

7 **Select the desired menu by moving the cursor.**
Press ▲ to go up, and ▼ to go down.

8 **Press EXECUTE.**
The selected menu will appear on the TV screen.

***To erase the menu display***
Press MENU again.

**Note**
The menu display will not be output to the TV screen if connection is made via the LINE OUT S VIDEO connector or LINE OUT VIDEO jacks.

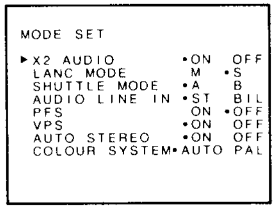


```
AUTO MENU

▶PLAY-REW-POWER OFF
 GO TO ZERO-STOP
 GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
 REW-TIMER REC
```

***AUTO MENU***
The VTR can be set to enter the desired operational sequence. For the actual operation, refer to "Assigning a Desired Operation Mode" on page 45.

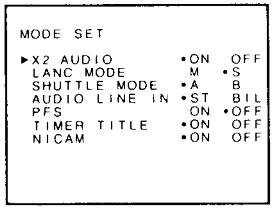
**EV-S1000E**



```
MODE SET

▶X2 AUDIO          •ON   OFF
 LANC MODE          M   •S
 SHUTTLE MODE      •A    B
 AUDIO LINE IN     •ST   BIL
 PFS                ON  •OFF
 VPS               •ON   OFF
 AUTO STEREO       •ON   OFF
 COLOUR SYSTEM•AUTO      PAL
```

**EV-S1000E (UK)**



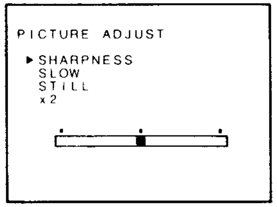
```
MODE SET

▶X2 AUDIO          •ON   OFF
 LANC MODE          M   •S
 SHUTTLE MODE      •A    B
 AUDIO LINE IN     •ST   BIL
 PFS                ON  •OFF
 TIMER TITLE       •ON   OFF
 NICAM             •ON   OFF
```

***MODE SET***
Various mode settings can be made in this menu. For details of each setting, refer to "Mode Setting" on page 30.

### PICTURE ADJUST

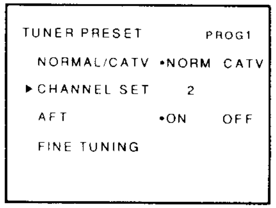
The playback picture can be adjusted to obtain maximum quality in this menu. Refer to "Picture Adjustments" on page 40


PICTURE ADJUST
▶SHARPNESS
SLOW
STILL
x2

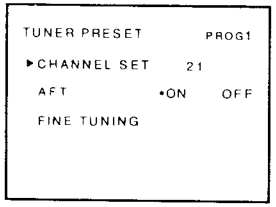
### TUNER PRESET

Presetting of the active channels and fine tuning of a weak station can be performed in this menu. For the actual operation, refer to the "Presetting the Active Channels" on page 26

EV-S1000E

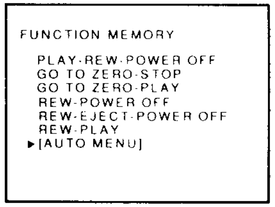

TUNER PRESET PROG1
NORMAL/CATV •NORM CATV
▶CHANNEL SET 2
AFT •ON OFF
FINE TUNING

EV-S1000E (UK)

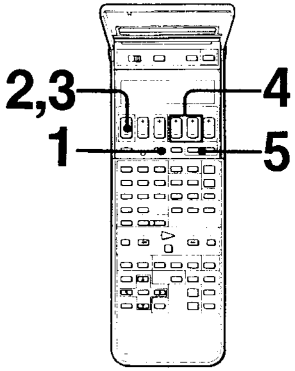

TUNER PRESET PROG1
▶CHANNEL SET 21
AFT •ON OFF
FINE TUNING

### FUNCTION MEMORY

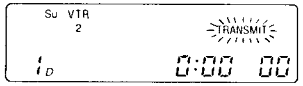
A desired operational sequence of the VTR can be assigned to the FUNCTION MEMORY button on the Commander. With a press of the FUNCTION MEMORY button, the selected sequence will begin. Refer to "Assigning an Auto Menu Mode to the FUNCTION MEMORY Button" on page 47.


FUNCTION MEMORY
PLAY-REW-POWER OFF
GO TO ZERO-STOP
GO TO ZERO-PLAY
REW-POWER OFF
REW-EJECT-POWER OFF
REW-PLAY
▶[AUTO MENU]

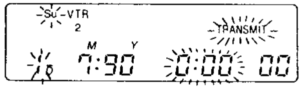
# Date and Clock Setting



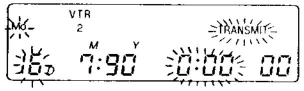
1



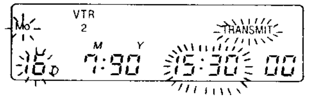
2



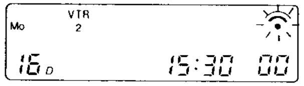
3



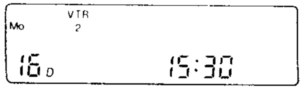
4



5



6



### Before You Begin

The time and date between the years 1990 and 2004 can be set with the Commander.

### Operation

**Example:** To set to 15:30, Monday, July 16, 1990.

1 **Open the cover and press CLOCK SET.**

2 **Press the D (day) button until 7 M 90 Y is displayed.**
The day will be advanced slowly up to 30 days ahead and then the month will be advanced.

3 **Press the + side or – side of the D (day) button until 16 D is displayed.**
The day of the week appears automatically.

4 **Press the H (hour) and M (minute) buttons under TURN OFF to set to 15:30.**

5 **Point the Commander at the VTR and press TRANSMIT.**
A beep sound confirms that the date and clock setting is registered in the VTR as well.

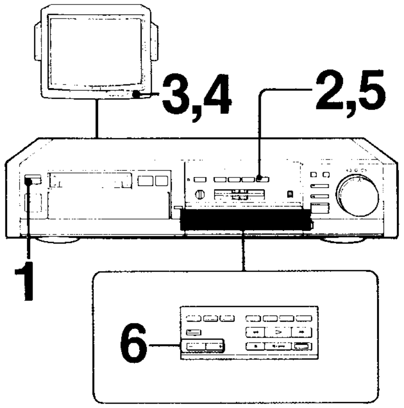
6 **Check the display window on the unit and close the cover.**

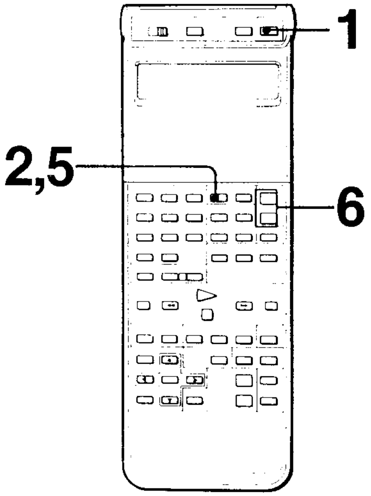
**When 0:00 is blinking on the unit**
Any time power is interrupted for more than one hour, you will see 0:00 blinking when power is restored. You will have to re-set the date and clock again.

**When a short beep sounds repeatedly**
The VTR is in the timer recording or quick timer recording mode and the setting cannot be transmitted.

---

# Adjusting the TV





### Before You Begin

If you have connected your VTR and TV using the AERIAL OUT on the VTR, one of the television programme positions must be adjusted to receive the VTR's playback signal. If TV — VTR connection is made by other means, skip this step.

### Operation

1 **Make connections referring to "Connections" and press ON/STANDBY.**

2 **Press INPUT SELECT to light LINE L2 in the display window.**
Do not connect any equipment to the LINE IN 2 VIDEO jack.

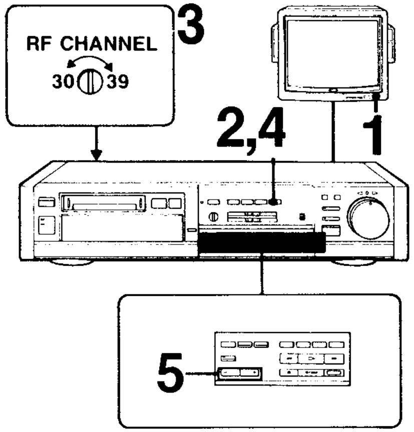
3 **Turn on the TV and select a programme position that is not used to receive a TV station.**

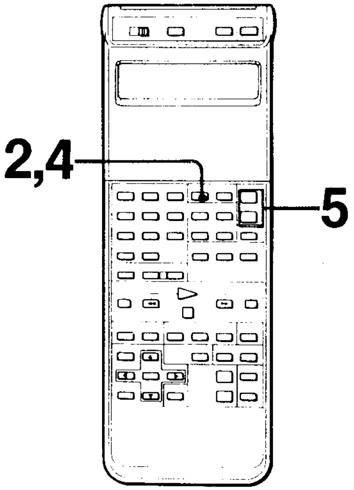
4 **Tune the TV so that a blue screen with time counter and tape speed indication is clearly seen on the TV screen.**

5 **Press INPUT SELECT to light TUNER in the display window.**

6 **Press the PROG (PROGRAM) + / – and check that the screen changes to a different programme.**

Now your TV is tuned to receive the VTR's playback picture. Whenever playing back a tape, select the programme position you chose in step 3. If you are not sure how to tune your TV, refer to the TV's instruction manual or consult your dealer.





### When the Playback Picture is not Free of Disturbance

1 **Select a programme position on the TV between UHF channels 30 and 39, so that the TV shows no picture and a steady rustling sound or no sound is heard.**

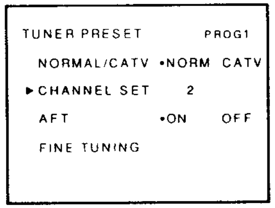
2 **Press INPUT SELECT to light LINE L2 in the display window.**
Do not connect any equipment to the LINE IN 2 VIDEO jack.

3 **Turn the RF CHANNEL screw with the supplied screwdriver until an undistorted screen is obtained.**

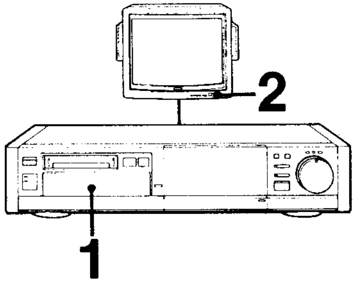
4 **Press INPUT SELECT to light TUNER in the display window.**

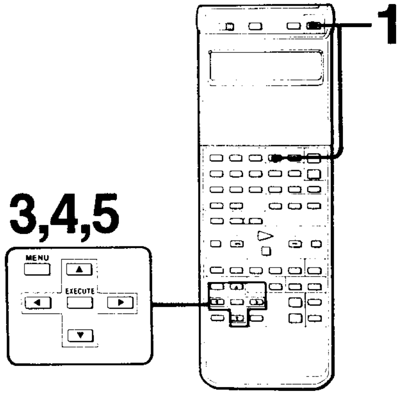
5 **Press PROG (PROGRAM) + / – and check that the screen changes to a different programme.**

## Presetting the Active Channels



```
TUNER PRESET              PROG1
  NORMAL/CATV   •NORM  CATV
▶CHANNEL SET     2
  AFT           •ON    OFF
  FINE TUNING
```





### Before You Begin

- Your VTR is capable of receiving the following channels:
  **EV-S1000E:** VHF channels E2 — E4, E5 — E12, UHF channels E21 — E69, and cable TV channels S01 — S03, S1 — S20 and S21 — S41
  **EV-S1000E (UK):** UHF channels B21 — B68
- The receivable channels are governed by the TV broadcasting system in your area.
- Up to 60 channels can be allocated to any desired programme position.
- The TUNER PRESET menu can be displayed only when VTR — TV connection is made via the AERIAL OUT socket on the VTR, the MONITOR OUT EURO-AV or S VIDEO.

### To Call Up the TUNER PRESET Menu

1 **Turn on the VTR and press INPUT SELECT to light the TUNER indicator and the programme position number in the display window.**

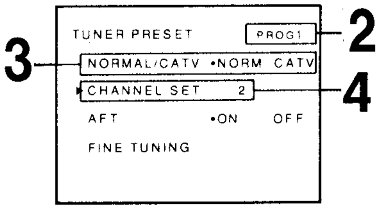
2 **Turn on the TV.**
Set to the programme position for the VTR playback if VTR — TV connection is made via the AERIAL OUT socket on the VTR. Select VTR input if VTR — TV connection is made via MONITOR OUT EURO-AV or S VIDEO.

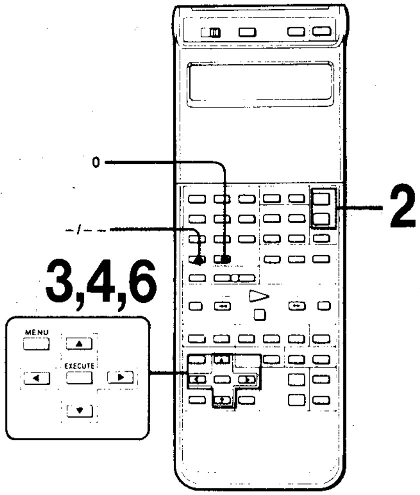
3 **Press MENU while the VTR is in the stop mode.**
The main MENU appears.

4 **Move cursor with ▲ or ▼ to TUNER PRESET.**

5 **Press EXECUTE.**
The TUNER PRESET menu appears.

**Note for the users of EV-S1000E (UK)**
The TUNER PRESET menu of the EV-S1000E (UK) does not have the NORMAL/CATV selection which is shown in the illustration.





### Tuning a Desired Channel

**[For EV-S1000E (UK), skip steps 1 and 2.]**

1 Call up the TUNER PRESET menu.

2 Select the desired programme position by pressing PROG (PROGRAM) +/−.

3 Move cursor to NORMAL/CATV with ▲ or ▼. Select NORM to receive normal programmes and CATV to receive CATV programmes with ◀ or ▶.

4 **Move cursor to CHANNEL SET with ▲ or ▼ and keep pressing ◀ or ▶.**
The channel number automatically increases with ▶ and decreases with ◀. The number stops changing when the first channel received in your area is detected and that channel will be displayed.

5 **To allocate a channel to the next programme position, repeat steps 2 to 4.**

6 **Press EXECUTE to store the allocated channels and return to original screen.**

*To Allocate the Channels Directly*

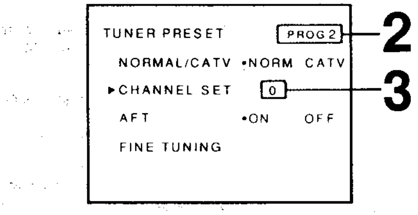
In step 4 in "Tuning a Desired Channel," set the cursor to CHANNEL SET. Enter the desired programme numbers using the programme position number and −/−− buttons. To enter one's digits, press 0 and then the desired number. To enter two-digit numbers, press −/−−, the ten's digit number, and lastly the one's digit number.

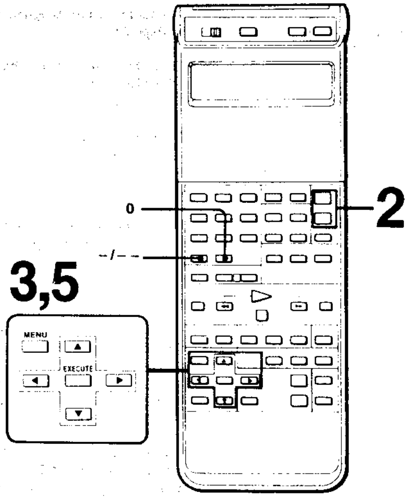
**Note**

If the picture displayed on the screen in step 4 is so distorted that you cannot identify the menu operation screen, first pull out the aerial cable from the AERIAL IN socket, next repeat step 4, then return the aerial cable to the AERIAL IN socket.

**Channel scanning on your VTR**

- When ▶ is pressed in steps 4 and 5, the channels are scanned in the following order. When ◀ is pressed the scanning order is reversed.
  **VHF (E2-E12) → UHF (E21-E69) → CATV (S1-S20) → HYPER BAND (S21-S41) → CATV (S01-S05).**
- The EV-S1000E (UK) only scans UHF channels B21 to B68.
- In Italy, channels 13 to 20 correspond to channels A to H.





### Erasing Unwanted Programme Positions

The VTR can be preset so that only the desired programme positions will appear when you press PROG (PROGRAM) +/−.

1 **Call up the TUNER PRESET menu.**

2 **Press PROG (PROGRAM) +/− to call up the unused programme position.**

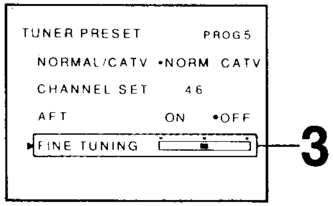
3 **Press −/−− and then 0 or keep pressing ◀ or ▶ until 0 is displayed.**

4 **Repeat steps 2 and 3 to erase other programme positions.**

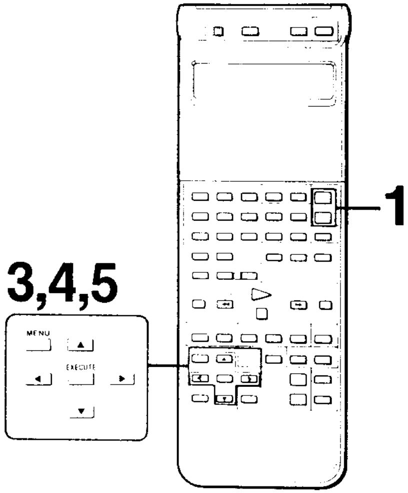
5 **Press EXECUTE.**

***To enter the erased programme positions again***

Follow the procedure in "Tuning a Desired Channel."



```
TUNER PRESET          PROG5
  NORMAL/CATV  •NORM  CATV
  CHANNEL SET    46
  AFT           ON    •OFF
▶ FINE TUNING  [     ▪     ]
```



## Manually Fine-tuning a Weak Station

If AFT ON is selected in the TUNER PRESET menu, the VTR automatically tunes the received channels. However, when the programme received on the VTR is distorted due to signal interference, manual fine tuning may solve the problem.

1 **Select the distorted programme position by pressing PROG (PROGRAM) +/–.**

2 **Call up the TUNER PRESET menu.**

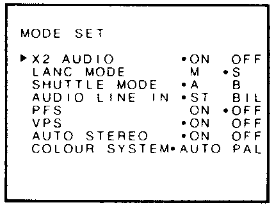
3 **Move cursor to FINE TUNING.**

4 **Press ◀ or ▶ until the best picture is obtained.**
AFT OFF will be automatically selected. The fine tuning meter appears.

5 **Press EXECUTE to store that position and return to the original screen.**

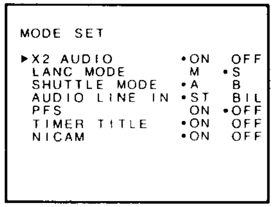
# Mode Setting

EV-S1000E

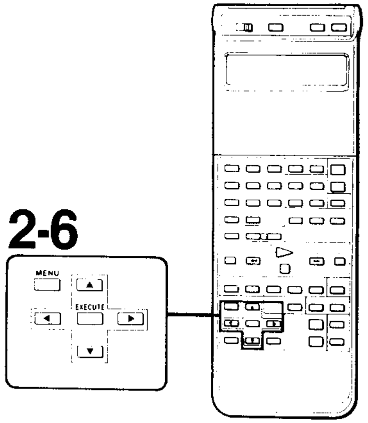


```
MODE SET
▶X2 AUDIO          •ON   OFF
 LANC MODE          M   •S
 SHUTTLE MODE      •A    B
 AUDIO LINE IN     •ST   BIL
 PFS                ON  •OFF
 VPS               •ON   OFF
 AUTO STEREO       •ON   OFF
 COLOUR SYSTEM•AUTO      PAL
```

EV-S1000E (UK)



```
MODE SET
▶X2 AUDIO          •ON   OFF
 LANC MODE          M   •S
 SHUTTLE MODE      •A    B
 AUDIO LINE IN     •ST   BIL
 PFS                ON  •OFF
 TIMER TITLE       •ON   OFF
 NICAM             •ON   OFF
```



Check the setting in the MODE SET menu before operating this VTR. Make changes depending upon the features you wish to enjoy on this VTR.

### Operation

1 **Press MENU.**
The main MENU appears.

2 **Move cursor by using ▲ or ▼ to MODE SET.**

3 **Press EXECUTE.**
The MODE SET menu appears.

4 **Select the mode to be set by using ▲ or ▼.**

5 **Select the desired mode by using ◀ or ▶.**

6 **Press EXECUTE.**
The selected mode will be stored and the MODE SET menu will be erased.

### Details of the MODE SET Menu

***X2 AUDIO ON/OFF***
Select ON if you wish to hear the sound during ×2 speed playback. The playback sound will automatically be switched to monaural. Select OFF if you do not wish to hear the sound during ×2 speed playback.

***LANC MODE M/S****
This selection is necessary when remotely controlling other video equipment with this VTR, or when controlling this VTR with other video equipment via the CONTROL L connector. Select M to control other video equipment with this VTR. Select S to control this VTR with other video equipment.

Note that the VTR will automatically enter the LANC MODE M mode in the following cases:
1) When the PLAYER control button is pressed and the button is turned on.
2) When the EDIT STANDBY button is pressed and the indicator is turned on.

***SHUTTLE MODE A/B***
Change the setting depending upon the type of video equipment you wish to control with this VTR. Select A when a remote commander with JOG/SHUTTLE function cannot be used for the other video equipment. Select B when a remote commander with JOG/SHUTTLE function can be used for the other video equipment.

***AUDIO LINE IN ST(stereo)/BIL(bilingual)***
Select ST to receive stereo programme sources from the AUDIO LINE IN jacks.
Select BIL to receive bilingual programme sources from the AUDIO LINE IN jacks.

***PFS (picture fine select)***
If the picture is distorted or has streaks, switch to ON or OFF whichever provides a better picture. Normally, select OFF.

***VPS ON/OFF [not available for EV-S1000E (UK)]***
Select ON to record a TV programme using the VPS function. Select OFF otherwise. See "VPS Function" on page 65 for details.

***TIMER TITLE ON/OFF [for EV-S1000E (UK) only]***
Select ON to start timer recording with a timer title. Select OFF otherwise. See "Recording a Timer Title" on page 64 for details.

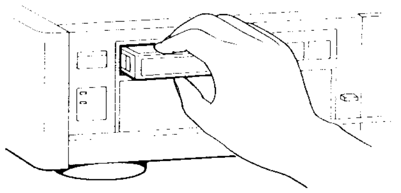
***AUTO STEREO [not available for EV-S1000E (UK)]***
Normally set to ON to receive and record the stereo/bilingual broadast programmes automatically.
Select OFF if there is too much interference in the stereo sound. The broadcast will be received in monaural.

***NICAM ON/OFF [for EV-S1000E (UK) only]***
Select ON to receive and record the stereo/bilingual programmes based on the "NICAM" system adopted in the United Kingdom. Otherwise, select OFF.

***COLOUR SYSTEM AUTO/PAL [not available for EV-S1000E (UK)]***
Normally set to AUTO. According to the TV programme, the colour system will automatically be switched to PAL or DDR SECAM. Select PAL if the signal is too weak or the picture is distorted. DDR SECAM programmes may not be displayed properly.

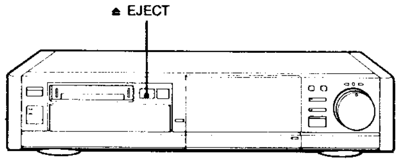
## Handling Video Cassettes

### Cassette Insertion



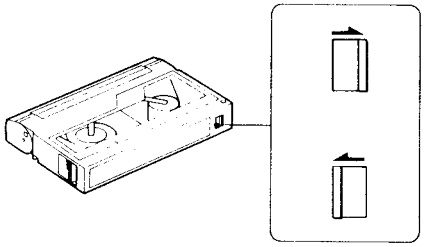
Insert the cassette by slowly pressing it with the window facing upwards. When a cassette is inserted, the power will be turned on automatically.

### Cassette Ejection



Press ≜ EJECT on the unit. When the VTR is turned off, pressing the ≜ EJECT button will turn on the unit, eject the cassette, and turn it off again. ≜ EJECT will not function during recording or recording pause mode.

### Erase Protection



When recording is made on a pre-recorded tape, the previous recording will be erased. To avoid unintentional erasure, slide out the red tab on the cassette to cover the opening.

### Recording/playback Time

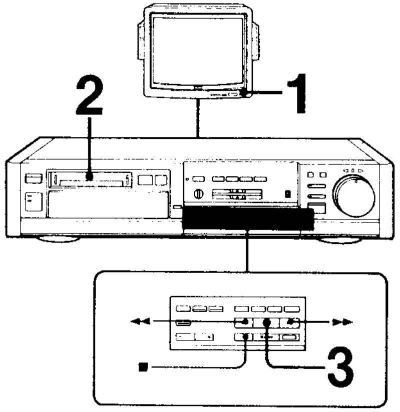
The recording time of a cassette in the LP mode is twice as long as that in the SP mode. However, to obtain better quality picture, use of SP mode is recommended. The recording speed can be selected with the REC MODE button. The playback speed will automatically be detected.

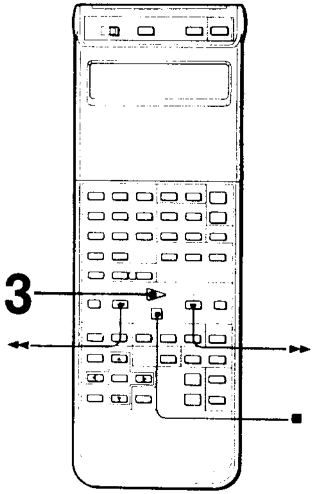
| Type of Cassette | SP mode | LP mode |
|---|---|---|
| P5-15MP | 15 min. | 30 min. |
| P5-30MP/E5-30HME | 30 min. | 1 hour |
| P5-60MP/E5-60HME | 60 min. | 2 hours |
| P5-90MP/E5-90HME | 90 min. | 3 hours |

**Notes on cassettes**

- Never insert anything in the small holes at the rear of the cassette as the VTR distinguishes between Hi8 cassette tapes and standard 8 mm cassette tapes by the shape of the holes.
- Store cassettes in their cases and keep them in an upright position to prevent intrusion of dust and uneven winding.
- To record from the beginning of the tape, run the VTR for about 15 seconds at the beginning of the cassette before recording. It will avoid missing the starting point during playback on a video cassette recorder.
- When the VTR is not in use, remove the cassette.

# Playback





### Playing a Tape

**1** **Turn on the TV and select the programme position for the VTR.**
If VTR-TV connection is made via the MONITOR OUT EURO-AV or VIDEO LINE OUT jacks on the VTR, select the input for the VTR.

**2** **Insert a cassette.**
The VTR will be turned on.

**3** **Press ▷.**
Playback starts.

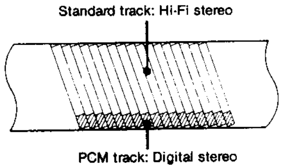
***To stop playback***
Press ■.

***To rewind the tape***
Press ◄◄.

***To advance the tape rapidly***
Press ►►.

## Selecting the Monitor Sound

*Audio recording pattern on the video tape*



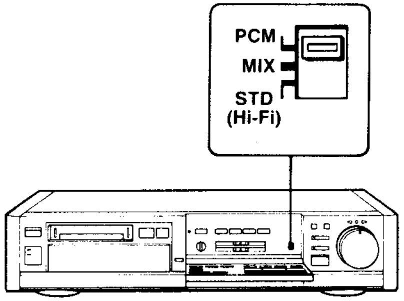
***Selecting the playback track***

Choose the desired track to be played back by setting the AUDIO MONITOR switch.

**PCM**
To playback the digital stereo signals recorded on the PCM track. When nothing is recorded on the PCM track, Hi-Fi stereo track will automatically be played back.

**MIX**
To playback the mixed sound of the PCM track and the standard track.

**STD (Hi-FI)**
To playback the Hi-fi stereo track recorded on the standard track.



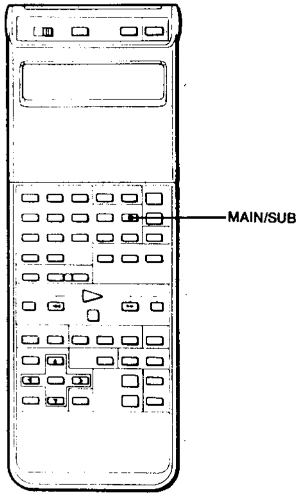
***Selecting the playback sound after dubbing additional sounds***

Set the AUDIO MONITOR switch in the following manner.

**PCM**
To playback the additionally dubbed sound (PCM track) only.

**MIX**
To playback both the additionally dubbed sound (PCM track) and the original sound (standard track).

**Notes**
- Normally set the AUDIO MONITOR switch to PCM to enjoy high quality playback sound.
- The additionally dubbed sound cannot be heard if the AUDIO MONITOR switch is set to STD (Hi-Fi).



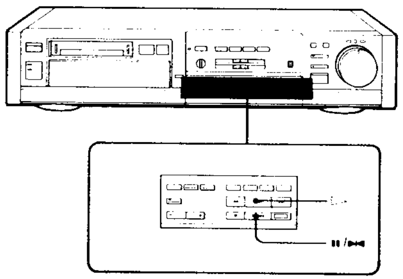
***Selecting the playback sound of a stereo/bilingual tape***

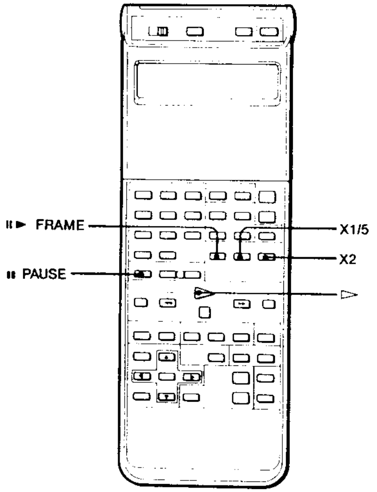
Choose the desired sound to be played back with the MAIN/SUB button on the Commander.

| **Type of tape** | **MAIN/SUB button and indicator** |
|---|---|
| Stereo | **Each press changes the playback sound to:**<br>STEREO (stereo sound) ←┐<br>↓<br>L (left channel)<br>↓<br>R (right channel) ─┘ |
| Bilingual | **Each press changes the playback sound to:**<br>MAIN/ (main sound) ←┐<br>↓<br>SUB/ (sub sound)<br>↓<br>MAIN/ SUB/<br>(main/left channel and sub/right channel) ─┘ |

**If the sound is not heard or heard only intermittently**
When a tape which has been recorded on a video camera recorder or a video cassette recorder without the PCM function is played back on this unit, set the AUDIO MONITOR selector to STD. The PCM indicator may blink, but it will not affect the sound.

**When connection is made to a TV without video/audio inputs**
To monitor the playback sound in stereo, make connection to a stereo system.





## Various Playback Modes

### *Playback pause/still*

Press ❚❚/▶◀ on the unit, or ❚❚ or ❚❚▶ on the Commander during playback. Press ▷ to resume normal playback.

### *Frame-by-frame playback (Commander only)*

Press ❚❚▶ in the playback still mode. Each press of ❚❚▶ will advance the picture one frame. Press ▷ to resume normal playback.

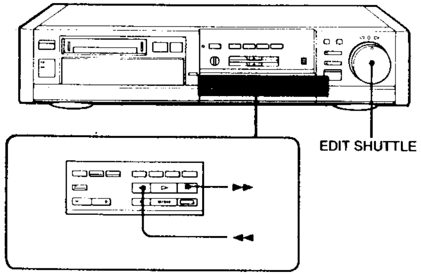
### *Slow speed playback*

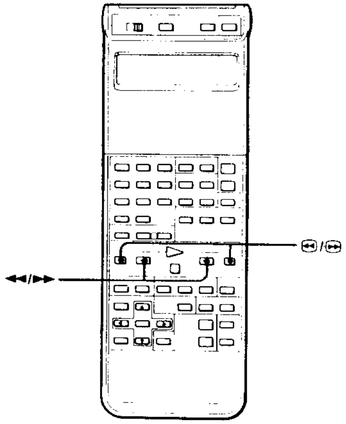
Press X1/5 for slow playback at 1/5 times normal speed. The speed setting can be made from any playback mode. Press ▷ to resume normal playback.

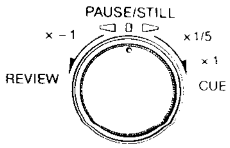
### *Double speed playback*

Press X2 for double speed playback. The sound can be heard when X2 AUDIO ON is selected in the MODE SET menu (see page 30). The sound will automatically be switched to monaural when this button is pressed. The speed setting can be made from any playback mode. Press ▷ to resume normal playback.

**Note**
Slow speed playback will automatically be cancelled after one minute.







### *Picture search*

Press ◀◀ or ▶▶ during playback. The picture will be scanned in reverse with ◀◀ and forward with ▶▶ as long as they are pressed. Release the button to return to the previous playback mode.

### *Locked picture search*

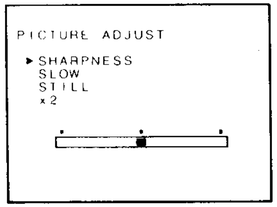
Press (◀◀) or (▶▶) SEARCH during playback. The picture will keep on scanning in reverse with (◀◀) and in forward with (▶▶) even after the button is released. To resume normal playback, press ▷.

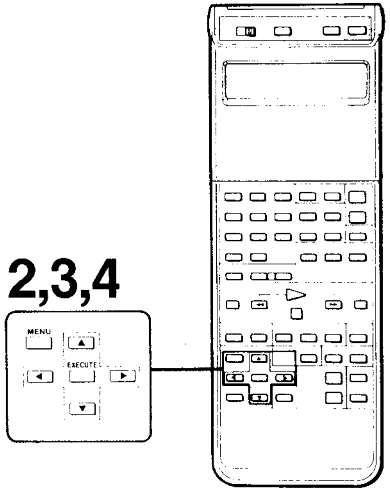
### *FR picture search*

Press ▶▶ during fast-forward or ◀◀ during rewind modes. The fast-forward or rewind mode picture can be viewed while the button is pressed.

### *Using the EDIT SHUTTLE*

Various playback modes can be selected by holding the EDIT SHUTTLE in the position illustrated. Turn it clockwise for forward direction and counterclockwise for reverse direction. Releasing it will make the picture enter the PAUSE/STILL mode. To resume normal playback, press ▷.


PICTURE ADJUST
▶ SHARPNESS
SLOW
STILL
x 2


2,3,4
MENU
▲
EXECUTE
◀
▶
▼

## Picture Adjustments

The picture can be adjusted as desired using the PICTURE ADJUST menu. Call up the PICTURE ADJUST menu referring to the following procedure:

1. **Press MENU.**
   The main MENU appears.
2. **Move cursor to PICTURE ADJUST by using ▲ or ▼.**
3. **Press EXECUTE.**
   The PICTURE ADJUST menu appears.
4. **Move cursor to the parameter to be adjusted by using ▲ or ▼.**
5. **Press ◀ or ▶ to adjust the picture.**
6. **Press EXECUTE to store the setting and erase the PICTURE ADJUST menu.**

### *Details of each parameter*

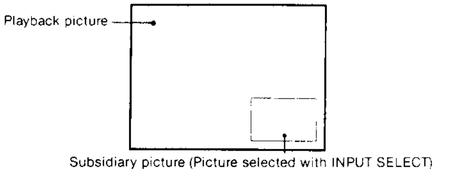
**SHARPNESS**
Press ▶ for a sharpter picture. Press ◀ for a softer picture. Adjustable only in the playback mode.

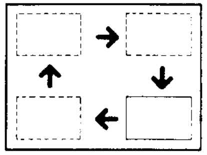
**SLOW**
Press ◀ or ▶ to clear out the noise bands that may appear during slow speed playback. Adjustable only in the slow speed playback mode.

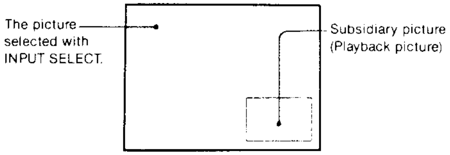
**STILL**
Press ◀ or ▶ so that the vertical shaking of the picture during the still mode will stop. Adjustable only in the still mode.

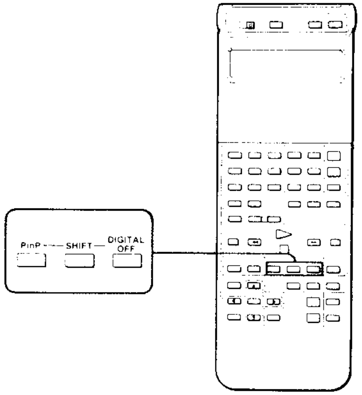
**X2**
Press ◀ or ▶ to clear out the noise bands that may appear during the x 2 playback mode. Adjustable only in the x 2 mode.

**Note**
The cursor position will change when the VTR's playback mode changes.


Playback picture
Subsidiary picture (Picture selected with INPUT SELECT)




The picture selected with INPUT SELECT.
Subsidiary picture (Playback picture)


PinP
SHIFT
DIGITAL OFF

## Inserting a Subsidiary Picture in the Playback Picture — P in P

### *Calling-up the subsidiary screen*

**Press P in P during playback.**
When TUNER is selected with INPUT SELECT, the TV picture can be viewed in the subsidiary screen.

### *Changing the position of the subsidiary picture*

**Press SHIFT.**
The position will be shifted as illustrated.

### *Inverting the position of the subsidiary picture*

**Press P in P again.**

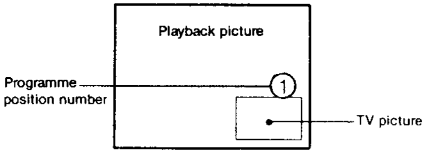
### *To turn off the subsidiary picture*

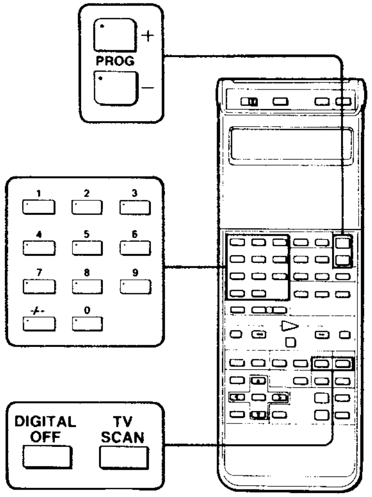
**Press DIGITAL OFF.**
The position of the subsidiary picture will be stored in the memory.

**Sound during P in P**

If VTR-TV connection is made via the MONITOR OUT jacks on the VTR:
The sound of the main picture is output.

If VTR-TV connection is made via the LINE OUT jacks on the VTR:
During playback, the sound of the playback picture of this VTR is output. In other modes, the sound of the input source selected on this VTR is output.


Playback picture
Programme position number
1
TV picture


PROG
+
–
1
2
3
4
5
6
7
8
9
-/-
0
DIGITAL OFF
TV SCAN

## Watching TV Channels in Succession — TV Scan

You can watch each TV programme for a few seconds, in the preset order, while playing back a tape.

### *Operation*

**Press TV SCAN during playback.**
The TV programme will be displayed in the subsidiary picture for a few seconds with the programme position number. After all of the preset programmes are displayed, the first preset programme position will appear again.

### *Watching the desired programme position in the subsidiary screen*

**Press the channel number button or press PROG (PROGRAM) + / –.**

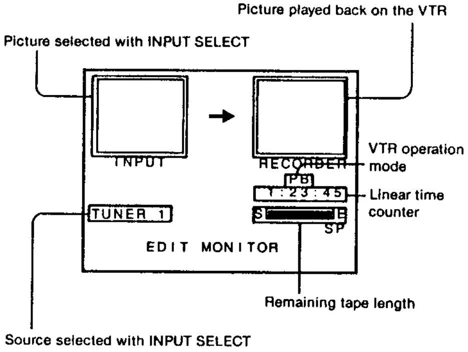
### *Turning off the subsidiary picture*

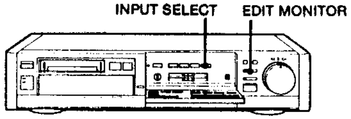
After TV scanning is completed, press DIGITAL OFF.
During TV scanning, enter the programme position of the desired programme directly by the programme position number buttons on the Commander or the PROG(PROGRAM) + / – buttons.

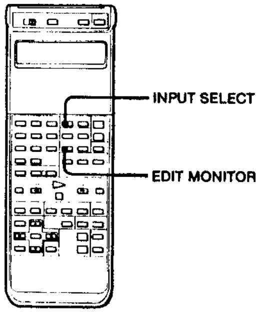
## Watching Two Pictures Simultaneously — EDIT MONITOR

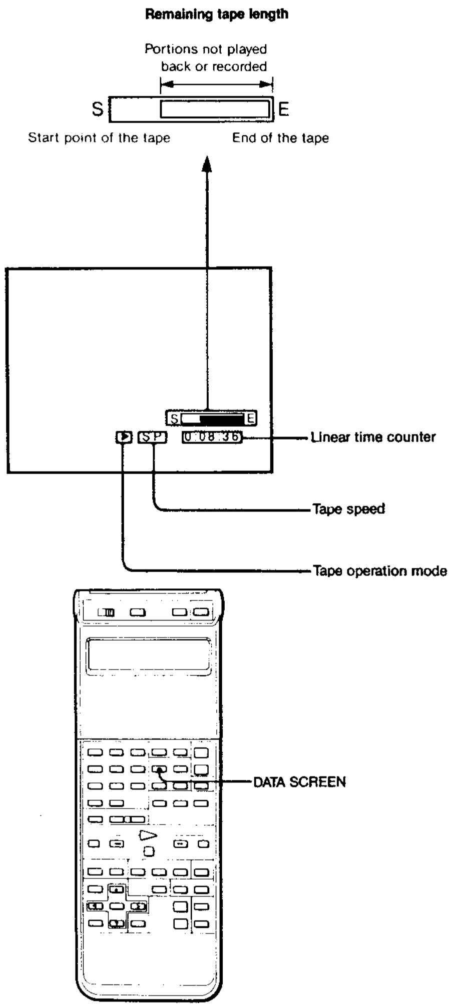
Press EDIT MONITOR on the Commander or the VTR.
The playback picture of this VTR and the picture selected by the INPUT SELECT button can be viewed simultaneously in the EDIT MONITOR screen.

Refer to the "Editing" section for the convenient use of EDIT MONITOR screen during editing.


Picture played back on the VTR
Picture selected with INPUT SELECT
INPUT
RECORDER
PB
VTR operation mode
1 : 23 : 45
Linear time counter
TUNER 1
S
E
SP
EDIT MONITOR
Remaining tape length
Source selected with INPUT SELECT


INPUT SELECT
EDIT MONITOR


INPUT SELECT
EDIT MONITOR


Remaining tape length
Portions not played back or recorded
S
E
Start point of the tape
End of the tape
S
E
SP
0 08 36
Linear time counter
Tape speed
Tape operation mode
DATA SCREEN

### Data Screen

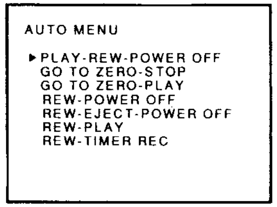
Data screen information illustrated on the left will automatically appear on the screen during playback or recording as a reference. Note, however, that the data screen will not be displayed when VTR — TV connection is made via the VIDEO LINE OUT jack of this unit.

***To erase or display the data screen***
Press DATA SCREEN on the Commander.

**Note on the remaining tape length indicator**
The remaining tape length indicator shows the approximate amount of tape left.

### Assigning a Desired Operation Mode

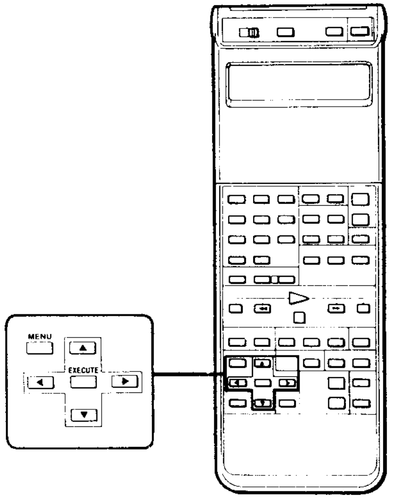
Guided by the AUTO MENU, you can make the VTR enter the desired operational sequence automatically.



```
AUTO MENU

▶PLAY-REW-POWER OFF
 GO TO ZERO-STOP
 GO TO ZERO-PLAY
 REW-POWER OFF
 REW-EJECT-POWER OFF
 REW-PLAY
 REW-TIMER REC
```

1. **Press MENU.**
   The main MENU appears.
2. **Move cursor by using ▲ or ▼ to AUTO MENU.**
3. **Press EXECUTE.**
   The AUTO MENU appears.
4. **Move cursor by using ▲ or ▼ to the desired operational sequence.**
5. **Press EXECUTE.**
   The selected operation will begin.
   The selected operation will be displayed on the screen for a few seconds.


MENU
EXECUTE

## Auto Menu Modes

**PLAY – REW – POWER OFF** plays back the tape, rewinds the tape when the end is reached, and turns the power off.

**GO TO ZERO – STOP** searches for the counter zero point and stops. See page 69.

**GO TO ZERO – PLAY** searches for the counter zero point and starts playback. See page 70.

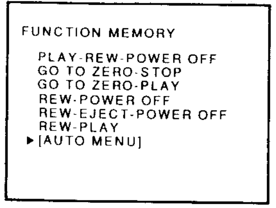
**REW – POWER OFF** rewinds the tape to the beginning and turns the power off.

**REW – EJECT – POWER OFF** rewinds the tape to the beginning, ejects the cassette, and turns the power off.

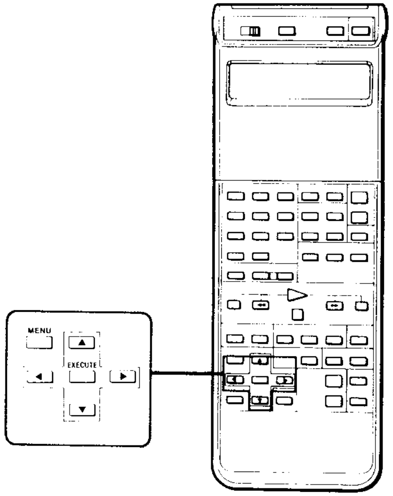
**REW – PLAY** rewinds the tape to the beginning and starts playback.

**REW – TIMER REC** rewinds the tape to the beginning and enters the timer recording standby mode for timer recording. A cassette with its red tab slid out will be ejected.

**Note on REW — TIMER REC**
If the VTR is in the timer recording standby mode, first press TIMER REC (ON/OFF) to cancel the standby mode, next turn on the power to the unit, then call up the AUTO MENU referring to the procedure on page 45.


FUNCTION MEMORY

PLAY-REW-POWER OFF
GO TO ZERO-STOP
GO TO ZERO-PLAY
REW-POWER OFF
REW-EJECT-POWER OFF
REW-PLAY
▶ [AUTO MENU]



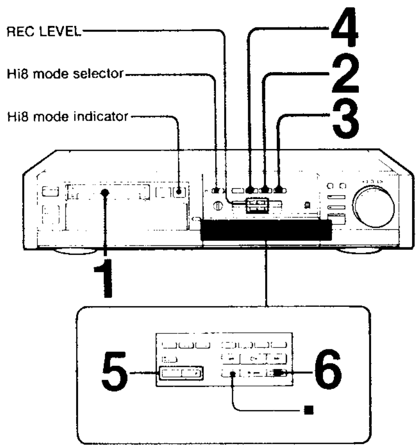
## Assigning an Auto Menu Mode to the FUNCTION MEMORY Button

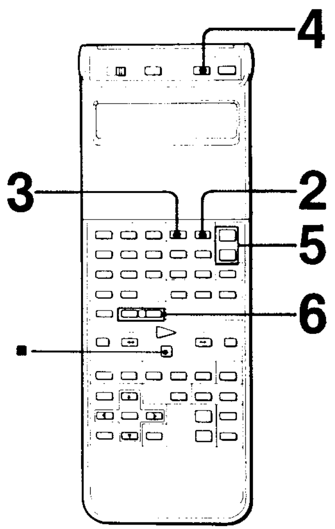
One of the AUTO MENU modes can be assigned to the FUNCTION MEMORY button on the Commander.

1. **Press MENU.**
   The main MENU appears.
2. **Move cursor with ▲ or ▼ to FUNCTION MEMORY.**
3. **Press EXECUTE.**
   The FUNCTION MEMORY menu appears.
4. **Move cursor to the desired operational sequence.**
5. **Press EXECUTE.**
   Now the selected operation is assigned to the FUNCTION MEMORY button. Every time FUNCTION MEMORY is pressed in the stop mode, the selected operation will begin.

   If [AUTO MENU] is selected in step 4, AUTO MENU will be displayed immediately when FUNCTION MEMORY is pressed, providing a direct access to the AUTO MENU.

# Recording TV Programmes





### Before You Begin

- Check that all of the connections are complete.
- Turn on the TV and select the video input on the TV or select the programme position for the recorder.
- Check the Hi8 indicator when using a Hi8 tape. Turn it on to record in the Hi8 mode. Turn it off to record in the standard 8 mm mode.
- Set the REC LEVEL controls to the appropriate level. (see page 52).
- Data screen displays will not be recorded.

### Operation

1 **Insert a cassette.**
The power will automatically be turned on.

2 **Select the recording speed, SP or LP, with REC MODE.**

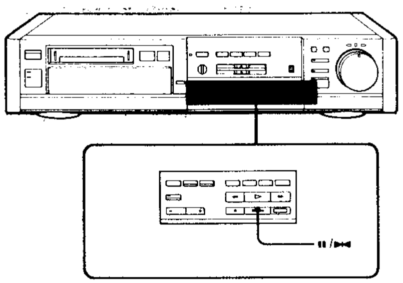
3 **Press INPUT SELECT so that the TUNER indicator appears in the display window.**

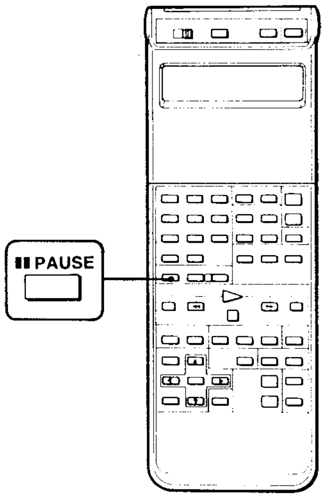
4 **Press TV/VTR so that the VTR indicator is turned on in the display window (only when TV — VTR connection is made via the AERIAL OUT socket on the VTR).**

5 **Select the programme position to be recorded with PROG (PROGRAM) +/–.**

6 **Press the right button while pressing ● REC on the Commander, or press the ● REC button on the unit.**
Recording will begin.

*To stop recording*
Press ■ STOP.





### To Cut Out Scenes by Recording Over It

*Overview*
Using the recording pause mode, you can stop recording when an unwanted scene appears and then resume recording smoothly. Moreover, utilizing the SHUTTLE EDIT buttons on the Commander or the EDIT SHUTTLE on the VTR, it is possible to cut out unwanted scenes by rewinding and/or advancing the tape, then entering the recording pause mode, and resume recording smoothly.

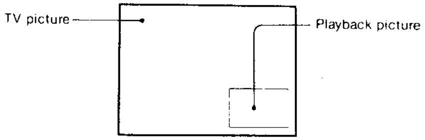
*Operation*

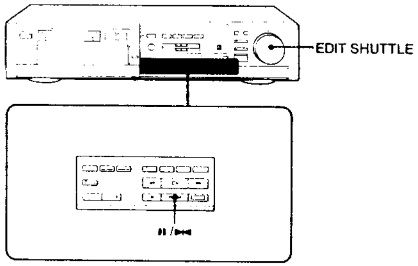
**Basic**

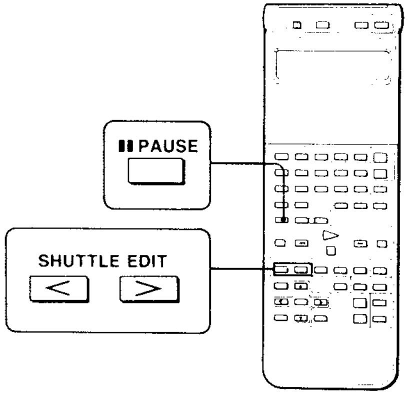
1 **While recording, press ❙❙ PAUSE on the Commander or ❙❙/▶◀ PAUSE/STILL on the VTR.**
The VTR will enter the recording pause mode.

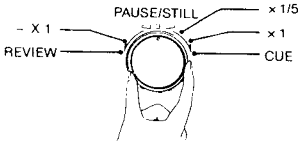
2 **Press ❙❙ PAUSE at the desired point to continue recording.**

**Note**
To protect the tape and video heads, the pause mode will be automatically released after about 7 minutes and the VTR will enter the stop mode.









**Advanced**

1 **While recording TV broadcasts, press II PAUSE on the Commander or II /▶◀ PAUSE/STILL on the VTR.**
The VTR will enter the recording pause mode.

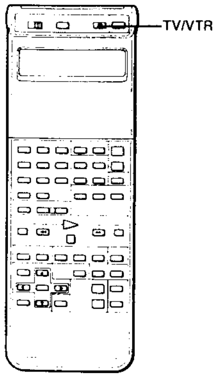
2 **Rewind the tape with SHUTTLE EDIT < or > on the Commander or EDIT SHUTTLE on the VTR to locate the point to resume recording.**
A P in P screen will be appear and the playback picture can be viewed in the subsidiary display.

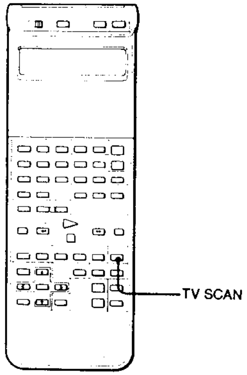
Using the SHUTTLE EDIT < or >:
Press < to reverse the picture (x 1 speed).
Press > to advance the picture (x 1 speed).

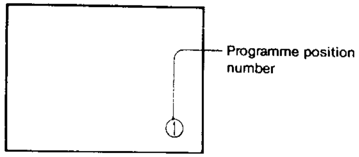
Using the EDIT SHUTTLE:
Turn to the left to search in reverse.
Turn to the right to search in forward.
The playback speed is as indicated in the illustration.

3 **Release the SHUTTLE EDIT button or the EDIT SHUTTLE at the desired point.**
The subsidiary screen will be cleared and the VTR enters the recording pause mode after approximately 2 seconds.

4 **Press II PAUSE on the Commander or II /▶◀ PAUSE/STILL on the unit when you wish to resume recording.**







## Watching a TV Broadcast While Recording

***If VTR-TV connection is made using the MONITOR OUT EURO-AV***
**Press TV/VTR to turn off the VTR indicator.**
The programme selected on the TV appears on the screen.

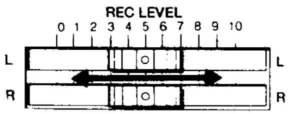
***If VTR-TV connection is made using the LINE OUT VIDEO/S VIDEO/AUDIO or MONITOR OUT S VIDEO jacks***
**Press TV/VTR to turn off the VTR indicator. Select the tuner input on the TV and change the programme position on the TV.**

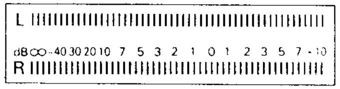
***If VTR-TV connection is made using the AERIAL sockets***
**Press TV/VTR to turn off the VTR indicator and change the programme position using the programme position number buttons on the TV.**

## To Scan TV Programmes

While viewing TV programmes, press TV SCAN. You can watch each TV programme for a few seconds in the order that you have preset them.

# Recording Level Adjustment





Adjust the REC LEVEL controls to record in the appropriate audio level referring to the peak programme meter in the display window.

### Appropriate Recording Level

***Recording sources with medium or lower frequency signals (e.g. vocals)***
Adjust so that the element at the 0dB level lights at the highest signal level.

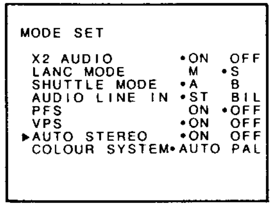
***Recording sources with medium or high frequency signals (e.g. trumpets, treble sound of violins)***
Adjust so that the element at the −1 to −3dB level lights at the highest level.

**Notes**

- During playback, the peak programme meter shows the peak of the recording sound.
- After recording, it is recommended that the REC LEVEL controls are set to the minimum levels for playback.
  These controls do not affect the volume during playback but noise may occur when playback is stopped and this may damage the speakers, if connected.

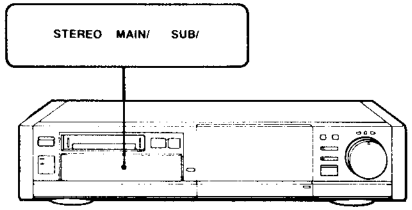
---

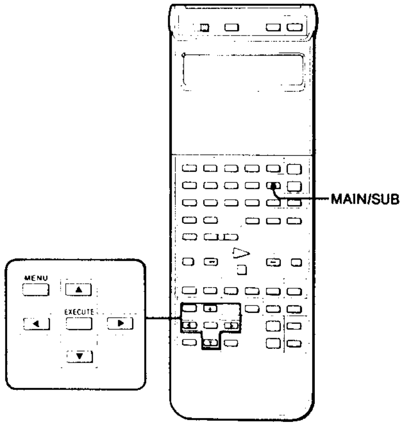
# Recording Stereo/Bilingual Programmes



```
MODE SET

 X2 AUDIO          •ON   OFF
 LANC MODE          M   •S
 SHUTTLE MODE      •A    B
 AUDIO LINE IN     •ST   BIL
 PFS                ON  •OFF
 VPS               •ON   OFF
▶AUTO STEREO       •ON   OFF
 COLOUR SYSTEM•AUTO      PAL
```





**EV-S1000E**

The EV-S1000E receives and records stereo/bilingual programmes based on the "Zweiton" system adopted in West Germany. To receive "Zweiton" broadcasts, select AUTO STEREO ON in the MODE SET menu (page 30).

***Stereo programmes***
When a stereo programme is received, the STEREO indicator appears in the display window. The MAIN/SUB button does not function for the stereo programme of the Zweiton system.

***Bilingual programmes***
When a bilingual programme is received, MAIN/ appears in the display window. If desired, it is possible to select the monitor sound. Press the MAIN/SUB button repeatedly until the desired sound is heard. The sound is selected cyclically in the following order.

| **Display** | **Sound to be heard** |
|---|---|
| MAIN/ | Main sound |
| SUB/ | Sub sound |
| MAIN/ SUB/ | Main sound on the left channel and sub sound on the right channel |

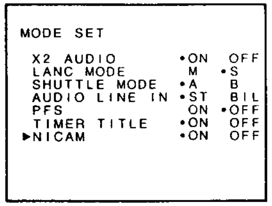
*To record*
A stereo or bilingual programme will be recorded on the standard track (Hi-Fi stereo) and PCM track as listed below, regardless of the sound being monitored.

| **Track** | | **Sound to be recorded** | |
|---|---|---|---|
| | | Stereo | Bilingual |
| PCM and Standard (Hi-Fi) | Left channel | Left channel | Main |
| | Right channel | Right channel | Sub |

*To record*
A stereo or bilingual programme will be recorded on the standard track (Hi-Fi stereo) and PCM track as follows, regardless of the sound being monitored.

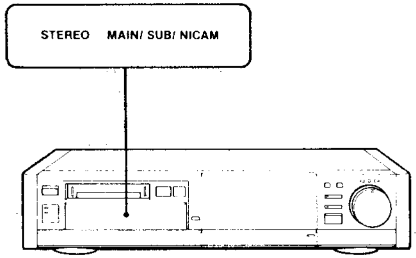
| **Track** | | **Sound to be recorded** | |
|---|---|---|---|
| | | Stereo | Bilingual |
| PCM and Standard (Hi-Fi) | Left channel | Left channel | Main |
| | Right channel | Right channel | Sub |

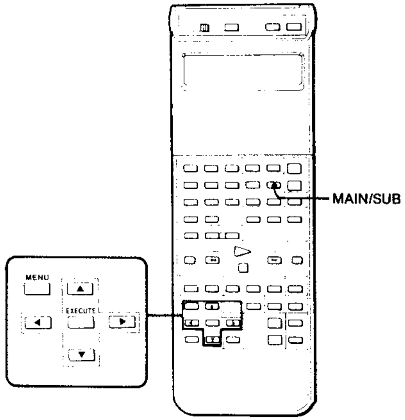
**Understanding the NICAM broadcast**
NICAM broadcasting has two-channel digital sounds called NICAM L and R channels in addition to the standard sound. The NICAM L and R are assigned to the stereo left and right channels or the main and sub sounds of a bilingual programme. The standard sound of most NICAM broadcasts is the mixed sound of the left and right channels for a stereo programme, and the main sound for a bilingual programme.



```
MODE SET

 X2 AUDIO          •ON   OFF
 LANC MODE          M   •S
 SHUTTLE MODE      •A    B
 AUDIO LINE IN     •ST   BIL
 PFS                ON  •OFF
 TIMER TITLE       •ON   OFF
▶NICAM             •ON   OFF
```





## EV-S1000E (UK)

The EV-S1000E (UK) receives and records stereo/ bilingual programmes based on the "NICAM" system adopted in the United Kingdom. To receive "NICAM" broadcasts, select NICAM ON in the MODE SET menu. If you do not wish to record in the NICAM system, select NICAM OFF in the MODE SET menu (page 30).

### *Stereo programmes*

When a stereo programme is received, STEREO and NICAM indicators appear in the display window.

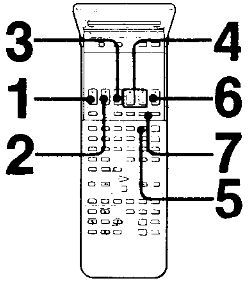
| **Display** | **Sound to be heard** |
|---|---|
| STEREO NICAM | Left channel sound on the left channel<br>Right channel sound on the right channel |

### *Bilingual programmes*

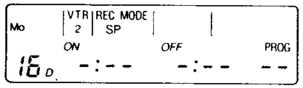
When a bilingual programme is received, NICAM and MAIN/ appears in the display window. If desired, it is possible to select the monitor sound Press the MAIN/SUB button repeatedly until the desired sound is heard. The sound is selected cyclically in the following order.

| **Display** | **Sound to be heard** |
|---|---|
| MAIN/ NICAM | Main sound |
| SUB/ NICAM | Sub sound |
| MAIN/ SUB/ NICAM | Main sound on the left channel<br>Sub sound on the right channel |

# Timer Recording

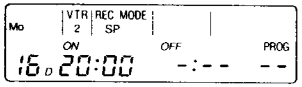


1



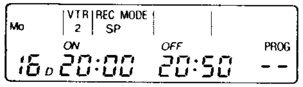
Mo
VTR 2
REC MODE SP
ON
OFF
PROG
16 D -:-- -:-- --

2,3



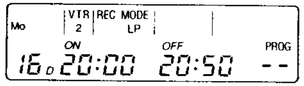
Mo
VTR 2
REC MODE SP
ON
OFF
PROG
16 D 20:00 -:-- --

4



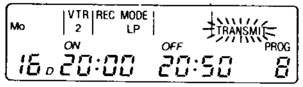
Mo
VTR 2
REC MODE SP
ON
OFF
PROG
16 D 20:00 20:50 --

5



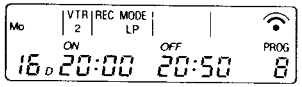
Mo
VTR 2
REC MODE LP
ON
OFF
PROG
16 D 20:00 20:50 --

6



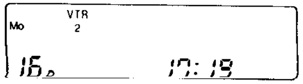
Mo
VTR 2
REC MODE LP
TRANSMIT
ON
OFF
PROG
16 D 20:00 20:50 8

7



Mo
VTR 2
REC MODE LP
ON
OFF
PROG
16 D 20:00 20:50 8

8



Mo
VTR 2
16 D
17:19

## Timer Recording on this VTR

Up to six preselected programmes, can be set on this unit, up to one month in advance.

### Before You Begin

- Turn on the TV and adjust it to view the VTR picture.
- Check to see that the clock on the Commander and the VTR show the present time.
- To operate the EV-S1000E read "VPS Function" first.

### Operation

Example: To record a programme broadcast from 20:00 to 20:50 on Monday, July 16, 1990 on programme position 8 in the LP mode.

1 **Open the cover of the Commander and press D until 16 appears.**
The day of the week, Mo (Monday), is automatically set.

2 **Set the recording start hour with TURN ON H.**

3 **Set the recording start minute with TURN ON M.**

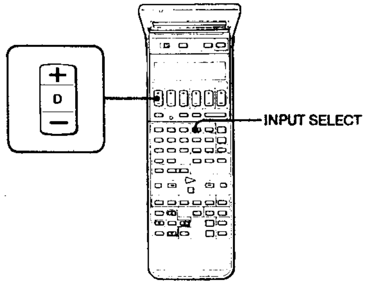
4 **Set the recording end hour and minute with TURN OFF H and M.**

5 **Set the recording mode, SP or LP with the REC MODE button.**

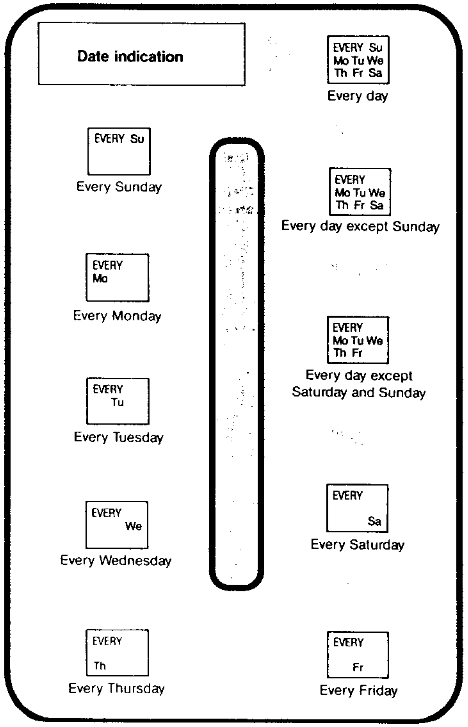
6 **Set the programme position with the PROG button.**
The TRANSMIT indicator blinks to indicate that all of the items are entered.

7 **Point the Commander to the VTR and press TRANSMIT.**
With a beep sound, the VTR enters the recording standby mode. The PROGRAM LIST appears on the screen for a few seconds.

8 **Close the cover of the Commander so that the present time appears on the LCD display.**
The VTR turns on, starts recording at the selected time, and turns off after recording ends.



+
D
−
INPUT SELECT



Date indication
EVERY Su Mo Tu We Th Fr Sa
Every day
EVERY Su
Every Sunday
EVERY Mo Tu We Th Fr Sa
Every day except Sunday
EVERY Mo
Every Monday
EVERY Mo Tu We Th Fr
Every day except Saturday and Sunday
EVERY Tu
Every Tuesday
EVERY Sa
Every Saturday
EVERY We
Every Wednesday
EVERY Th
Every Thursday
EVERY Fr
Every Friday

## To Set Other Programmes

Repeat steps 1 to 6 before step 7.

## To record from equipment connected to LINE IN VIDEO/AUDIO/S VIDEO 1 or 2 jacks

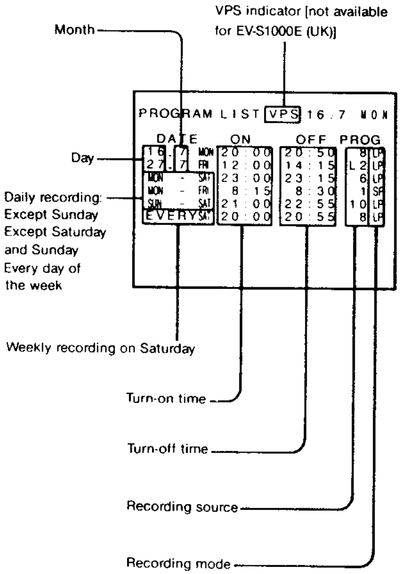
Press INPUT SELECT in step 5 to change the indication from PROG — to LINE L1 or LINE L2.

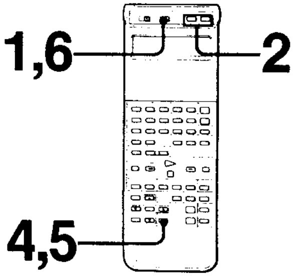
## Daily/Weekly Recording

This VTR can be preset to record the same programme each day of the week (daily recording) or the same programme on a specific day of every week.

Instead of step 1 in the "Operation", press D — on the Commander to change the LCD display in the order shown in the illustration. When the desired recording mode is set and transmitted to the VTR, the corresponding indicator lights in the display window.

**If a short beep sounds repeatedly when TRANSMIT is pressed**
A short beep indicates that the transmission is not received by the VTR. Press TRANSMIT again before closing the cover, then check the items below.
- An illogical setting has been made.
- Timer setting can only be performed when the VTR is turned off, or in the stop, or timer recording mode.
- Six timer settings have already been made.
- The tape is at its end.


Month
VPS indicator [not available for EV-S1000E (UK)]
PROGRAM LIST VPS 16.7 MON
DATE
ON
OFF
PROG
Day
Daily recording:
Except Sunday
Except Saturday and Sunday
Every day of the week
Weekly recording on Saturday
Turn-on time
Turn-off time
Recording source
Recording mode



### Checking the Timer Settings

The timer settings can be checked by displaying the PROGRAM LIST on the screen. If the power to the VTR turned on, simply press TIMER ON SCREEN. If the VTR is in the timer recording standby mode, follow the procedure below.

1 **Press TIMER REC (ON/OFF) to turn off the TIMER REC indicator in the display window.**

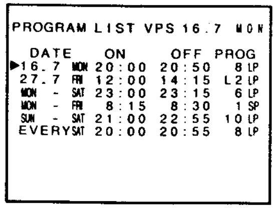
2 **Turn on the VTR and press TV/VTR to light the VTR indicator.**

3 **Turn on the TV.**
Set to the programme position for VTR playback if the VTR — TV connection is made via the AERIAL OUT socket on the VTR. Select VTR input on the TV if the VTR — TV connection is made via MONITOR OUT EURO-AV/S VIDEO or LINE OUT VIDEO/AUDIO/S VIDEO jacks.

4 **Press TIMER ON SCREEN.**
The PROGRAM LIST display appears on the screen.

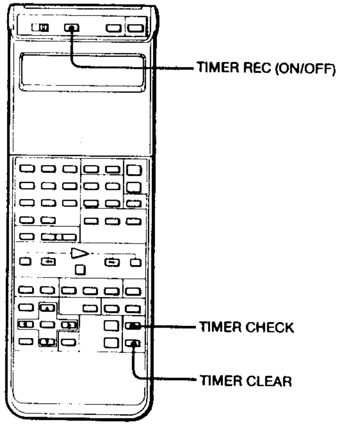
5 **Press TIMER ON SCREEN again to return to the original screen.**

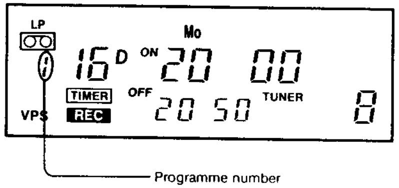
6 **Press TIMER REC (ON/OFF) to return to the timer recording standby mode.**



```
PROGRAM LIST VPS 16.7  MON

  DATE      ON       OFF  PROG
▶16.7 MON 20:00   20:50    8 LP
 27.7 FRI 12:00   14:15   L2 LP
 MON - SAT 23:00  23:15    6 LP
 MON - FRI  8:15   8:30    1 SP
 SUN - SAT 21:00  22:55   10 LP
 EVERY SAT 20:00  20:55    8 LP
```


TIMER REC (ON/OFF)
TIMER CHECK
TIMER CLEAR


LP
Mo
16 D
ON 20 00
TIMER
OFF 20 50
TUNER
8
VPS
REC
Programme number

### Clearing/Correcting the Timer Setting

#### *Referring to the PROGRAM LIST*

1 **Display the PROGRAM LIST referring to steps 1 to 4 in "Checking the Timer Settings."**

2 **Press TIMER CHECK to call up the cursor on the screen and move the cursor to the setting you want to correct or clear.**

3 **To clear the setting, press TIMER CLEAR.**
If there are other timer settings on the PROGRAM LIST display, press TIMER REC ON/OFF to return to the timer recording standby mode.

**To correct the setting, re-enter all of the items using the Commander. Refer to "Timer Recording — Operation" steps 1 to 7.**
In this case, the VTR automatically enters the timer recording standby mode.

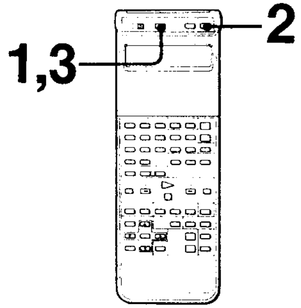
#### *Clearing the setting without the PROGRAM LIST*

1 **Press TIMER REC (ON/OFF).**

2 **Press TIMER CHECK repeatedly until the desired programme appears.**

3 **Press TIMER CLEAR.**

4 **Press TIMER REC (ON/OFF) to return to the timer recording standby mode if there are other programmes set for timer recording.**



## Using the VTR during Timer Recording Standby Mode

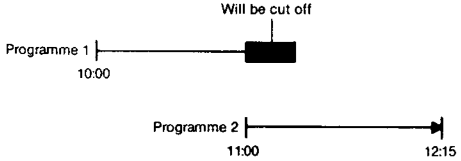
1 **Press TIMER REC (ON/OFF) to turn off the TIMER REC indicator.**

2 **Turn on the power of the VTR.**
The VTR is ready to be used.

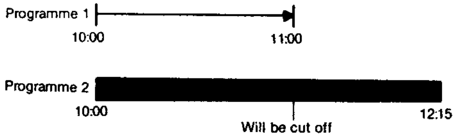
3 **After using the VTR, press TIMER REC (ON/OFF) and turn on the TIMER REC indicator to re-enter the standby mode for timer recording.**

## When the Timer Settings Overlap

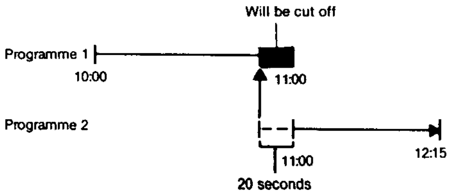
*If the setting of two programmes overlap*
The recording of the following programme will begin automatically before the proceeding programme ends.

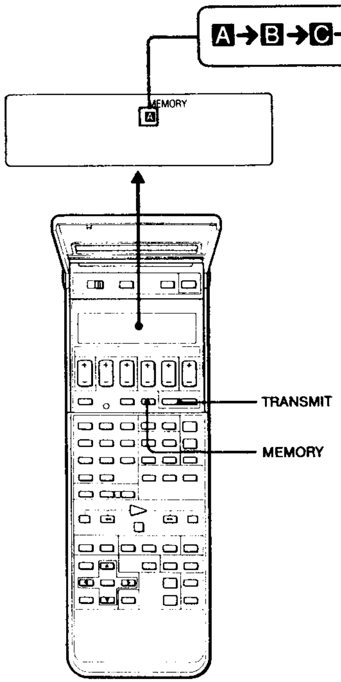


*If the turn on time of two programmes are the same*
The VTR will record the programme with the smaller programme number or listed first on the programme list.
The programme with the larger programme number or listed lower in the list will be cleared from the programme list.



*If the recording end time of programme 1 and the recording start time of programme 2 are the same*
The last 20 seconds of programme 1 will not be recorded because the VTR will enter the recording pause mode for programme 2 before programme 1 ends.





## To Store the Frequently Used Items in the Commander

The items selected for one timer recording programme will be erased from the LCD when the Commander cover is closed. It will be cleared from the programme list when recording is over. However, the turn-on/turn-off time and the programme position of up to four programmes can be stored in the Commander to be recalled later. This enables you to quickly access the most frequently used items, especially your favorite weekly programmes. The recording date will automatically be shifted to the next week after the recording is over.

### *Operation*

**Example:** To store a timer recording data in MEMORY A.

1 **Press MEMORY to indicate MEMORY A.**

2 **Set all of the items for timer recording referring to "Timer Recording — Operation."**

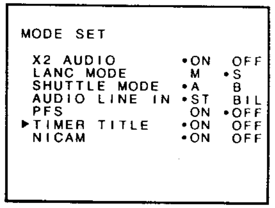
3 **Press MEMORY to change the indication to B, C, or D, and repeat step 2 for other programmes.**
The items set will be kept in the memory even when the Commander cover is closed.

### *Recalling and changing the items*

1 **Press MEMORY to call up the desired memory indication (A, B, C, or D).**

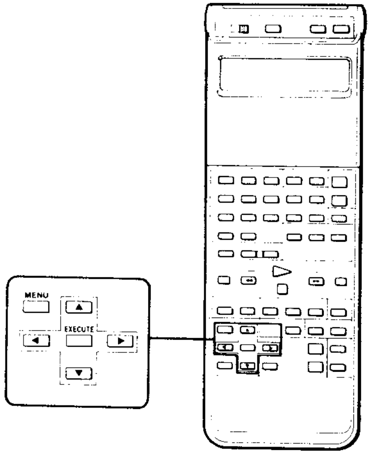
2 **Make whatever changes necessary.**

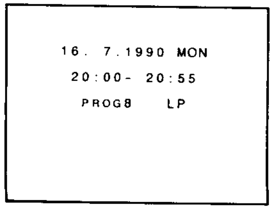
3 **Press TRANSMIT.**
The VTR enters the timer recording standby mode.



```
MODE SET

 X2 AUDIO          •ON  OFF
 LANC MODE          M  •S
 SHUTTLE MODE      •A   B
 AUDIO LINE IN     •ST  BIL
 PFS                ON •OFF
▶TIMER TITLE       •ON  OFF
 NICAM             •ON  OFF
```



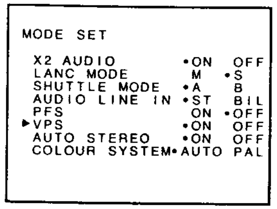


```
16. 7.1990 MON
20:00- 20:55
PROG8    LP
```

## Recording a Timer Title

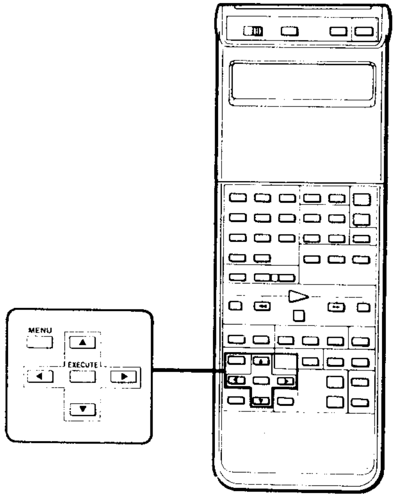
A timer title screen consisting of the recording start/end time, date of recording, and the programme position can be recorded on the tape for 3 seconds before the timer recording. The timer title is convenient for locating the beginning of a desired programme when several programmes are recorded on a single tape. Note that the timer title will be automatically recorded for EV-S1000E but will be turned off when using the VPS function. For EV-S1000E (UK), the timer title recording can be turned on and off by following the procedure below.

1. **Before setting the timer, press MENU.** The main MENU appears.
2. **Move cursor with ▲ or ▼ to MODE SET.**
3. **Press EXECUTE.** The MODE SET menu appears.
4. **Move cursor with ▲ or ▼ to TIMER TITLE.**
5. **Press ◀ or ▶ to select ON to record the timer title, and OFF to record without timer title.**
6. **Press EXECUTE to store the setting.** If ON is selected in step 5, the timer title will automatically be recorded before the timer recording starts.



```
MODE SET

 X2 AUDIO          •ON  OFF
 LANC MODE          M  •S
 SHUTTLE MODE      •A   B
 AUDIO LINE IN     •ST  BIL
 PFS                ON •OFF
▶VPS               •ON  OFF
 AUTO STEREO       •ON  OFF
 COLOUR SYSTEM•AUTO PAL
```



## VPS (Video Programme System) Function — not available for EV-S1000E (UK)

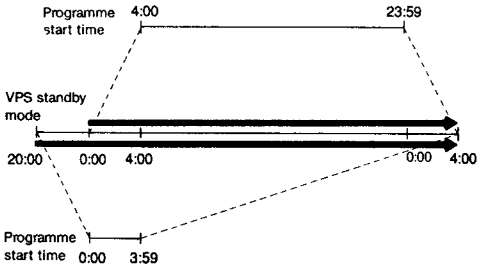
The German broadcasting system transmits VPS signals with the TV programmes which assures that your timer recording will be performed without missing any portion of it regardless of any changes in broadcasting time, extension, or broadcast interruption which might occur before or during that programme.

### *Operation*

1. **Check whether VPS is transmitted with the programme to be recorded.**
2. **Call up the MODE SET menu referring to "Mode Setting" on page 30.**
3. **Select VPS ON so that the VPS indicator lights in the display window.**
4. **Set the timer referring to "Timer Recording — Operation."**

**Notes**

- The VPS function can be turned on only when the TIMER REC indicator is turned off.
- If the VPS signal was not received on the VTR because it was too weak or because the station failed to transmit, timer recording will be performed without the VPS function regardless of the VPS indication.
- The recording will stop when the VTR receives a VPS programme interruption code during recording, for example, when an urgent news bulletin was inserted. As soon as the interrupted programme resumes, recording will continue.



***VPS Standby Mode***

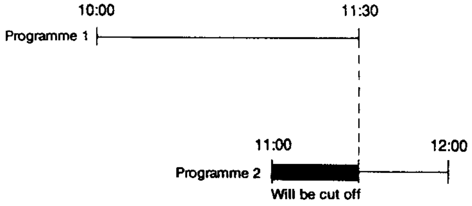
The VTR will be turned on to standby for VPS recording before the turn-on time and remains turned on past the preset turn-on time until the VPS signal is received to prepare for any change in the actual broadcast time.

**When the VPS timer recording is set for a programme which is expected to start between 4:00 and 23:59?**

The VTR will be turned on at 0:00 that day and will keep on waiting for the VPS signal until 4:00 of the next day.

**When the VPS timer recording is set for a programme which is expected to start between 0:00 and 3:59?**

The VTR will be turned on at 20:00 the day before the recording day and will keep on waiting for the VPS signal until 4:00 on the next day.

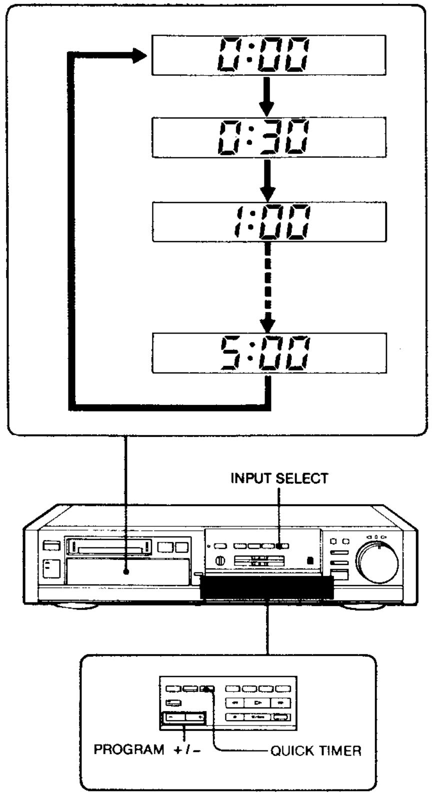


***If the actual recording time overlaps with the next timer recording programme***

There may be cases when the actual broadcast time of two timer recording programmes overlap owing to the shift made by the VPS signal. In this case, the programme that was broadcast first always has priority.

The recording of the second programme will begin only after the first programme is over.

# Quick Timer Recording



### What is Quick Timer Recording?

With the quick timer recording function, simple and rough timer recording can be made. The timer can be set to operate within 5 hours in units of 30 minutes.

### Operation

If you are recording, skip steps 1 to 3.

1 **Press INPUT SELECT so that TUNER indicator is turned on.**

2 **Insert a cassette.**

3 **Press QUICK TIMER.**
TIMER indicator lights in the display window.

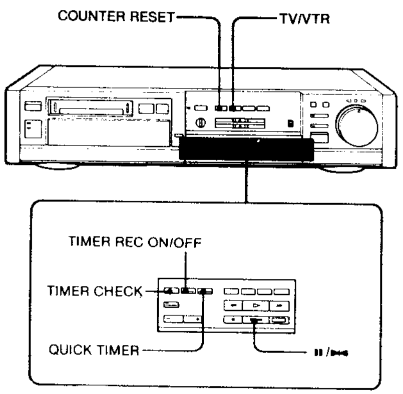
4 **Select the desired programme position with PROG (PROGRAM) + / – while 0:00 and the programme position number are blinking in the display window.**

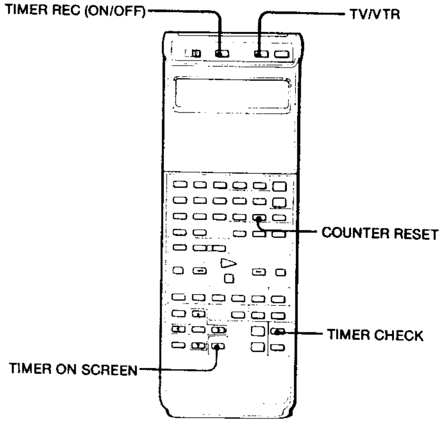
5 **Press QUICK TIMER again to start recording.**

6 **Press QUICK TIMER again to set the recording duration.**
Press within 30 seconds from step 3, otherwise the power will be turned off. Each press of QUICK TIMER changes the indication in the display window in units of 30 minutes.

7 **The recording duration will decrease minute by minute until 0:00 when the VTR will be automatically turned off.**

## Quick Timer Recording





***Buttons operable during quick timer recording***

- **II/▶◀** stops quick timer recording momentarily.
- **TIMER REC ON/OFF** stops timer recording.
- **QUICK TIMER** changes the recording duration.
- **TIMER ON SCREEN** displays the PROGRAM LIST.
- **TIMER CHECK** moves the cursor in the PROGRAM LIST or changes the programme number in the display window.
- **COUNTER RESET** resets the counter to zero.
- **TV/VTR** switches the screen to another programme received on the TV.

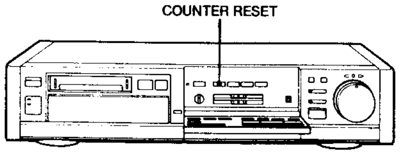
**If power interruption occurs during quick timer recording**

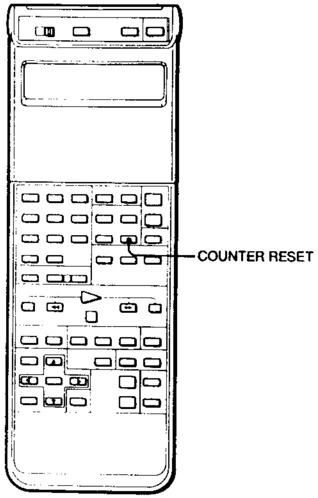
Recording will stop and the VTR will be turned off. If the power interruption lasted for less than one hour, and if the power recovered within the quick timer duration, recording will resume from that instant.

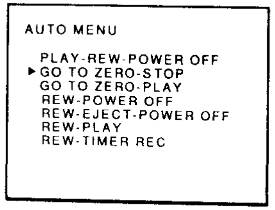
**If the unit is in the time recording standby mode**

Press TIMER REC ON/OFF to turn off the TIMER REC indicator, then press QUICK TIMER.

## Use of the Tape Counter







```
AUTO MENU

  PLAY-REW-POWER OFF
▶GO TO ZERO-STOP
  GO TO ZERO-PLAY
  REW-POWER OFF
  REW-EJECT-POWER OFF
  REW-PLAY
  REW-TIMER REC
```

### Understanding Counter Zero Position

The tape counter on this VTR can be used as a reference when you wish to locate a certain scene after recording or playback. Press COUNTER RESET to set the counter to "0H00M00S" (counter zero position) before operation.
The VTR will keep counting the length of tape being played back or recorded.

### Tape Return

The VTR can search for the counter zero position and stop. This function is useful for locating a particular scene after recording or playback.

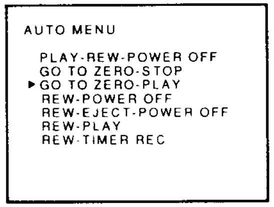
1 **Press COUNTER RESET at the desired scene during recording or playback.**

2 **Press ■ to stop after recording or playback.**

3 **Press MENU and select AUTO MENU.**
See "Assigning a Desired Operation Mode" (page 45) for operation.

4 **Move cursor to "GO TO ZERO — STOP."**

5 **Press EXECUTE.**



```
AUTO MENU

  PLAY-REW-POWER OFF
  GO TO ZERO-STOP
▶ GO TO ZERO-PLAY
  REW-POWER OFF
  REW-EJECT-POWER OFF
  REW-PLAY
  REW-TIMER REC
```

### Tape Return Play

The VTR will even search and start playback from the counter zero position after recording or playback.

**1 Repeat steps 1 to 3 in the "Tape Return" operation.**

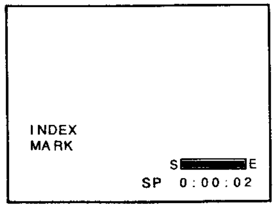
**2 Move cursor to "GO TO ZERO — PLAY"**

**3 Press EXECUTE.**

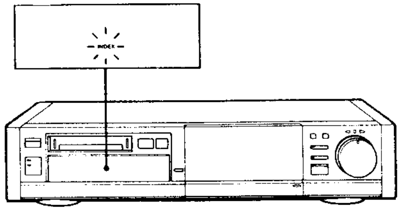
**Notes**

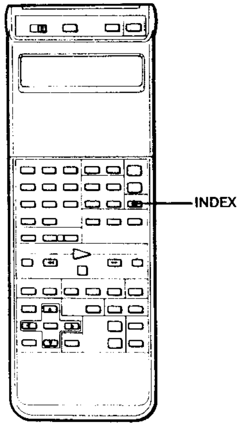
- The counter reading and the point on the tape may not correspond exactly. Use the counter as a reference.
- There will be a time lag of several seconds on the counter reading after repeated fast-forward or rewind operations.
- There will be a time lag of several seconds when a tape recorded in LP and SP mixed or a tape with blank portion between recordings is played back.
- If tape return or tape return play is operated within ±1 minute, it may take extra time to search for the 0H00M00S point.
- The tape will stop at the approximate "0H00M00S" point during tape return operation.

## Index Function



```
INDEX
MARK
                    S▬▬▬▬▬▬E
              SP  0:00:02
```





### Marking Index Signals

The desired position on a tape can be located easily by detecting the index signals. There are two ways in which to mark index signals, automatic and manual.

When the index signal is being marked, INDEX flashes in the display window and INDEX MARK lights on the TV screen.

***Automatic index mark***

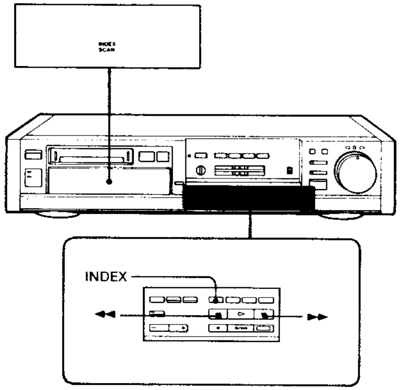
An index signal is automatically marked on the tape when the VTR starts recording.

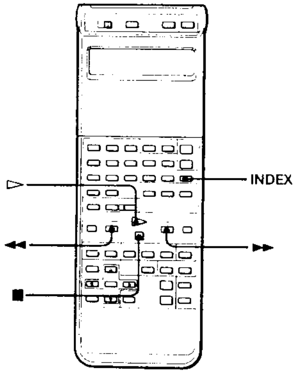
***Manual index mark***

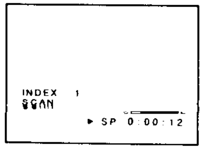
Index signals can be marked at desired scenes during recording or playback. Press INDEX MARK to mark an index.

**Notes**

- Leave an interval of more than 2 minutes between two index points so that the VTR can detect each INDEX signal accurately.
- The sound recorded on the tape will not be heard and a black bar appears at the bottom of the picture while the index signal is being marked during playback. However, the recorded signals are not affected.
- When the EDIT indicator is turned on in the display window, marking or erasing of index signals cannot be performed.
- Index signals cannot be marked on a tape whose safety tab is slid out.







## To Scan the Index Points — INDEX SCAN

*To scan the beginning of each index point while monitoring the picture*

1 **Insert a cassette with index signals marked.**

2 **Press INDEX in the playback or playback pause mode.**

3 **Press ▶▶ to advance and ◀◀ to go back to the next index.**
The tape will be scanned forward with ▶▶ and scanned in reverse with ◀◀ to the next index point and will be played back for approximately 10 seconds.

4 **To continue playback, press ▷.**
When no button is pressed, the picture is automatically scanned to the next or previous index.

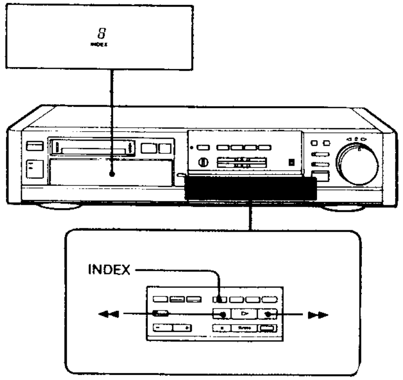
*To scan the beginning of each index point without viewing the picture*

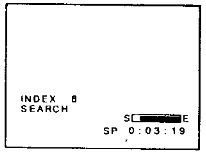
1 **Insert a cassette with index signals.**

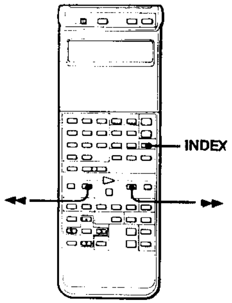
2 **Press INDEX in the stop mode.**

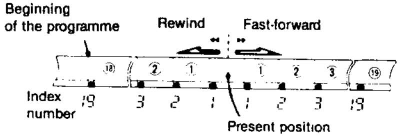
3 **Press ▶▶ to advance and ◀◀ to go back to the next index.**
The tape will be advanced with ▶▶ and rewound with ◀◀ to the index mark point without picture on the screen and then will be played back for approximately 10 seconds.

4 **Press ▷ to continue playback from that index point.**
When no button is pressed, the picture will be automatically scanned to the next or previous index.









## To Search for the Index Point — INDEX SEARCH

Direct search of the desired index point can be performed by assigning the number of how many indexes ahead or behind it is from the current tape position. Up to 19 indexes from the current position can be searched for.
The VTR counts down how many more indexes should be searched for and displays the number on the TV screen and in the display window.

1 **Insert a cassette with index signals.**

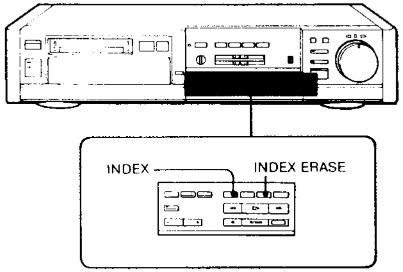
2 **Press INDEX in the stop or playback or playback pause mode.**

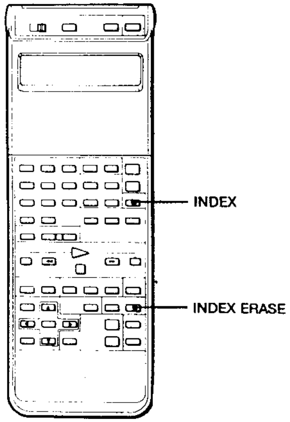
3 **Press INDEX again until the number of indexes that should be counted to reach the desired scene is displayed on the TV screen and the display window.**

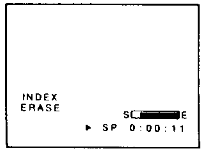
4 **Press ◀◀ if the index is behind or ▶▶ if the index is ahead of the current tape position.**
The VTR starts searching and the index number will be counted down to zero. Playback starts.

*To correct the index number*
Press ■ and repeat steps 2 to 4 above.

## Index Function







### Erasing an Index

The index marked on the tape can be erased.

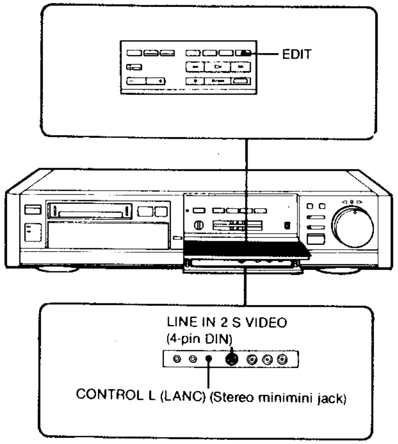
1 **Insert a cassette with index signals.**

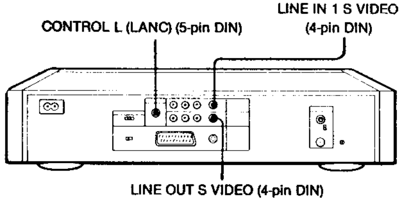
2 **Locate the index to be erased by index scan or index search.**

3 **Within approximately 10 seconds, while the tape is being played back, press INDEX ERASE.**
When the index signal is erased during index scan mode, index scan will resume.
When the index signal is erased during index search mode, normal playback will begin.

**Notes**
- Press INDEX ERASE more than 2 seconds after the playback starts.
- If the safety tab on the cassette is slid out, the index signal cannot be erased.
- While an index signal is being erased, the original sound recorded on the tape cannot be heard and a black bar appears at the bottom of the playback picture.
However, recorded signals are not affected.
- When the EDIT indicator is turned on in the display window, marking or erasing of index signals cannot be performed.
- The index signals marked by a VTR such as the EV-S850 series can be detected with this unit but cannot be erased. The index signals marked by this unit can be detected with a VTR such as the EV-S850 series but cannot be erased.
- When the audio is dubbed in the portion where an index was marked, the index signal may be erased.

## Before Editing





You can create your own video programme by editing with other VTRs. Take a look at the following examples to expand your pleasure in video operation.

### Use of the EDIT mode

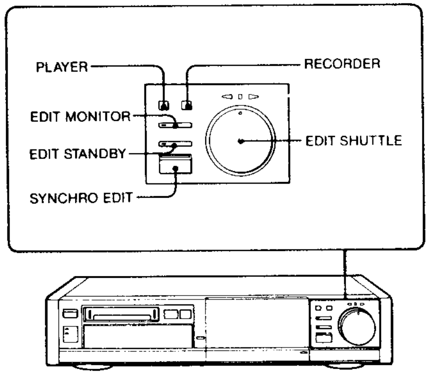
The EDIT mode activated by the EDIT button on the unit enables playback of a higher quality picture during editing. If your other VTR is equipped with this function, turn it on. However, note that even when using the EDIT mode during editing, the quality of the edited tape will have a certain extent of degradation in picture and sound. Avoid using the edited tape for multiple generations of editing.

### Use of the CONTROL L (LANC) connector

If your second VTR is equipped with a Sony control terminal LANC CONTROL L connector (stereo minimini jack or 5-pin DIN type), synchronized editing can be performed. The second VTR can be remotely controlled with this VTR by using the editing section on the front panel. Refer to the following example for the actual settings and operation to perform synchronized editing.

### Use of the S VIDEO jacks

Check whether your second VTR is equipped with S VIDEO input or output jacks. Use of the S VIDEO jacks will result in higher quality edited picture.


PLAYER
RECORDER
EDIT MONITOR
EDIT STANDBY
SYNCHRO EDIT
EDIT SHUTTLE

## Useful Functions during Synchronized Editing

### *EDIT SHUTTLE*

Enables quick access to the desired scene, both on the recorder and the player.

### *PLAYER/RECORDER buttons and indicator*

Turns on to indicate which VTR should be controlled by the EDIT SHUTTLE.

### *EDIT MONITOR button*

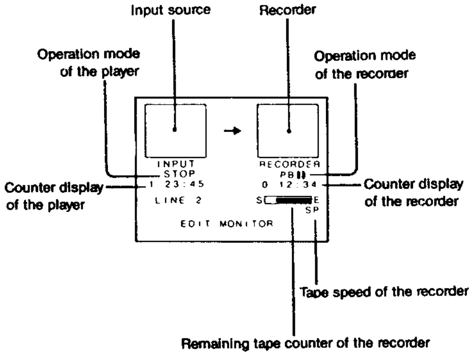
Displays the picture of the recorder as well as the input source on the screen.

### *EDIT STANDBY button*

Automatically displays the EDIT MONITOR screen with the recorder in the recording pause mode and the player in the playback pause mode. LINE IN 2 will be automatically be selected as the input source.

**Note**
When controlling the other VTR with the EDIT SHUTTLE, turn the EDIT SHUTTLE slowly not to go past the desired tape speed position.

## EDIT MONITOR Display during Editing


Input source
Recorder
Operation mode of the player
Operation mode of the recorder
INPUT
STOP
1 23:45
LINE 2
RECORDER
PB ‖
0 12:34
S E
SP
EDIT MONITOR
Counter display of the player
Counter display of the recorder
Tape speed of the recorder
Remaining tape counter of the recorder

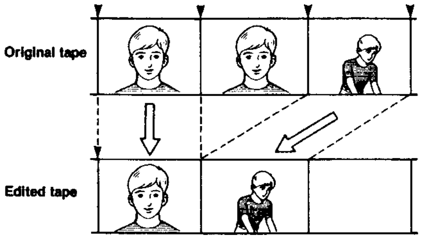
**Notes**
- The cable with an * (asterisk) is optional.
- The ⇨ mark indicates the signal flow.

## Various Tape Editing Methods

Various methods for easy and accurate tape editing are available with the VTR. Select the method according to your purpose and to the video/audio equipment you are using.

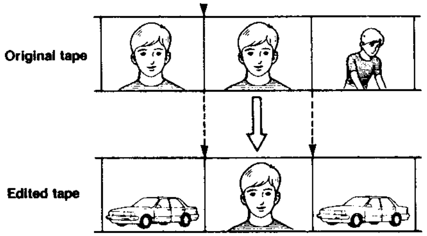
### *Assemble Editing*

Only the desired portions of an original tape can be edited onto another tape, one portion at a time.


Original tape
Edited tape

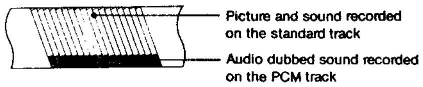
### *Insert Editing*

A prerecorded portion of a tape can be replaced with a new scene. Decide the start point and the end point on the recording VTR.


Original tape
Edited tape

### *Audio dubbing*

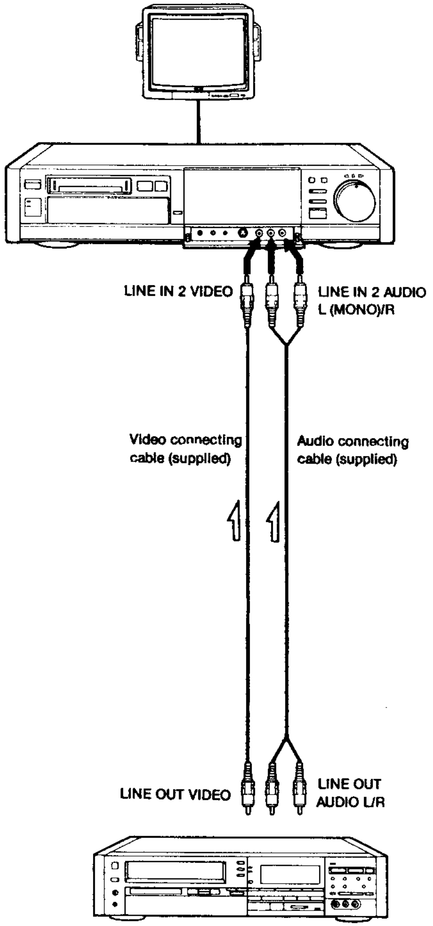
The sound recorded on the PCM audio track can be replaced with a new sound without changing the picture and sound recorded on the standard track.


Picture and sound recorded on the standard track
Audio dubbed sound recorded on the PCM track

**Notes**
- The picture may be distorted at the end point of an insert editing.
- Playback in various speeds may be distorted when edited from or onto another VTR.

| Editing Method | P: player<br>R: recorder | Page |
|---|---|---|
| Basic Editing | P: VTR<br>R: This VTR | 79 |
| | P: This VTR<br>R: VTR | 80 |
| Assemble Editing (Using the Synchronzied Editing Function) | P: 8 mm camera recorder with REMOTE (stereo minimini) jack<br>R: This VTR | 81 |
| | P: 8 mm or VHS VTRs with a CONTROL L (LANC) (5-pin DIN) connector<br>R: This VTR | 84 |
| Insert Editing (Using the Synchronized Editing Function) | P: 8 mm camera recorder with REMOTE (stereo minimini) jack<br>R: This VTR | 87 |
| Manual Assemble Editing | P: VTR<br>R: This VTR | 90 |
| Manual Insert Editing | P: VTR<br>R: This VTR | 92 |
| Audio Dubbing | P: a) Audio system<br>b) Microphone<br>R: This VTR | 94 |

# Basic Editing


LINE IN 2 VIDEO
LINE IN 2 AUDIO L (MONO)/R
Video connecting cable (supplied)
Audio connecting cable (supplied)
LINE OUT VIDEO
LINE OUT AUDIO L/R

## (1) Editing a Tape from Another VTR

### *Connection*

- Make connections referring to the illustration.
- If the other VTR is equipped with an S VIDEO output connector, make the connection.
- If the other VTR is a monaural type, connect the white plug to the other VTR's audio output jack and the white plug on the other end to the LINE IN 2 AUDIO L (MONO) jack of this VTR.

### *Preparation*

**On the other VTR = player**
- Activate the EDIT mode if it is equipped.

**On this VTR = recorder**
- Select the line input that the player is connected to with INPUT SELECT.
- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).

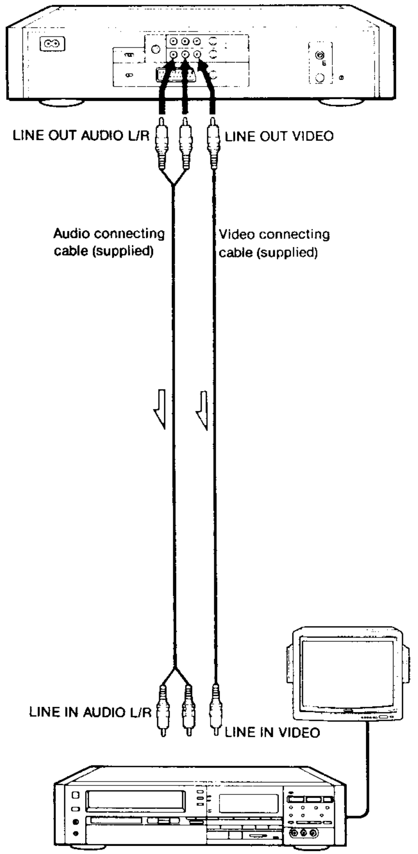
### *Operation*

**1** **Turn on the power to both units.**

**2** **Insert a source tape into the player. Insert a tape for recording into the recorder.**

**3** **Playback with the player and record with the recorder.**

**Note**
Avoid making both the VIDEO and S VIDEO connection at the same time.


LINE OUT AUDIO L/R
LINE OUT VIDEO
Audio connecting cable (supplied)
Video connecting cable (supplied)
LINE IN AUDIO L/R
LINE IN VIDEO

### (2) Editing a Tape to Another VTR

*Connection*

- Make connections referring to the illustration.
- If the other VTR is equipped with an S VIDEO input connector, make the connection.
- If the other VTR is a monaural type, make connections with the optional RK-C71 audio connecting cable.

*Preparation*

**On this VTR = player**

- Set AUDIO MONITOR to the appropriate position referring to "Selecting the Monitor Sound" page 36.
- Activate the EDIT mode.

**On the other VTR = recorder**

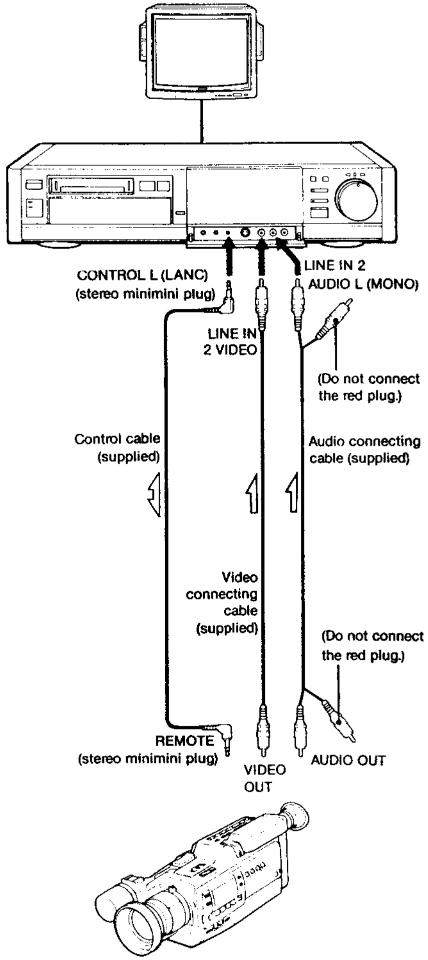
- Select the line input that the player is connected to.
- Activate the EDIT mode if it is equipped

*Operation*

1 **Turn on the power to both units.**

2 **Insert a source tape into the player. Insert a tape for recording into the recorder.**

3 **Playback with the player and record with the recorder.**


CONTROL L (LANC)
(stereo minimini plug)
LINE IN 2 VIDEO
LINE IN 2
AUDIO L (MONO)
(Do not connect the red plug.)
Control cable (supplied)
Audio connecting cable (supplied)
Video connecting cable (supplied)
(Do not connect the red plug.)
REMOTE
(stereo minimini plug)
VIDEO OUT
AUDIO OUT

### (1) Editing a Tape from a 8 mm Camera Recorder

*Connection*

- Make connections referring to the illustration.
- If the camera recorder is equipped with an S VIDEO output connector, make the connection.
- If the other VTR is a monaural type, connect the white plug to the other VTR's audio output jack and the white plug on the other end to the LINE IN 2 AUDIO L (MONO) jack of this VTR.

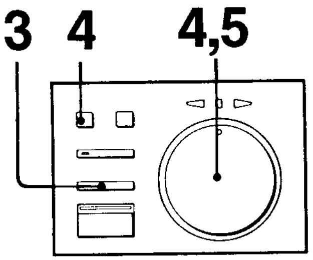
*Preparation*

**On the other VTR = player**

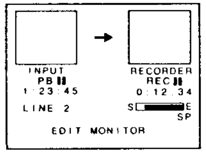
- Activate the EDIT mode if it is available
- Select LANC MODE S or the equivalent if selection is available.

**On this VTR = recorder**

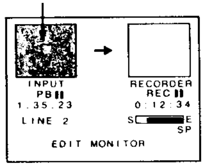
- Select LANC MODE M in the MODE SET menu (page 30).
- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).
- Check the other VTR and select SHUTTLE MODE A or B in the MODE SET menu (page 30).



3


INPUT
PB ❚❚
1:23:45
LINE 2
RECORDER
REC ❚❚
0:12:34
S E
SP
EDIT MONITOR

4,5


Decide the edit point.
INPUT
PB ❚❚
1:35:23
LINE 2
RECORDER
REC ❚❚
0:12:34
S E
SP
EDIT MONITOR

*Operation*

**1** **Turn on the power to both units.**

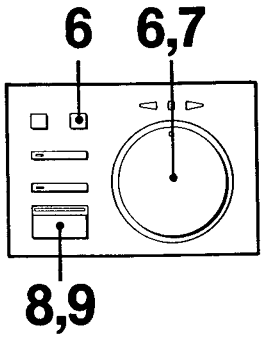
**2** **Insert a source tape into the player. Insert a tape for recording into the recorder.**

**3** **Press EDIT STANDBY on the recorder.**
The EDIT MONITOR screen will be displayed. LINE IN 2 will automatically be selected for the player.
The PLAYER control button will be turned on.
The recorder enters the recording pause mode.
The player enters the playback pause mode.

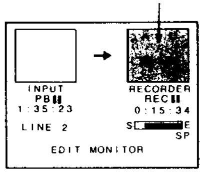
**4** **Check that the PLAYER control button is turned on and turn the EDIT SHUTTLE to locate the start point of the player.**
The available playback speeds are: REVIEW, PB ❚❚ (when EDIT SHUTTLE is released), ×1/5 (slow forward), PB (normal speed forward), and CUE.

**Note**
×1/5 speed playback on the other VTR is controllable if ×1/5 speed playback is available on the other VTR.

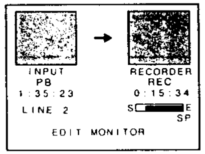
**5** **Release the EDIT SHUTTLE when the desired point is found.**
The player enters the playback pause mode.



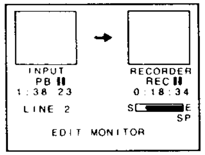
6
7


Decide the edit point.
INPUT
PB ❚❚
1:35:23
LINE 2
RECORDER
REC ❚❚
0:15:34
S E
SP
EDIT MONITOR

8


INPUT
PB
1:35:23
LINE 2
RECORDER
REC
0:15:34
S E
SP
EDIT MONITOR

9


INPUT
PB ❚❚
1:38:23
LINE 2
RECORDER
REC ❚❚
0:18:34
S E
SP
EDIT MONITOR

**6** **Press RECORDER control button to turn it on and turn the EDIT SHUTTLE to locate the start point of the recorder.**
The available playback speeds are: REVIEW, – ×1 (normal speed reverse), REC ❚❚ (when the EDIT SHUTTLE is released), ×1/5 (slow forward), ×1 (normal speed forward), and CUE

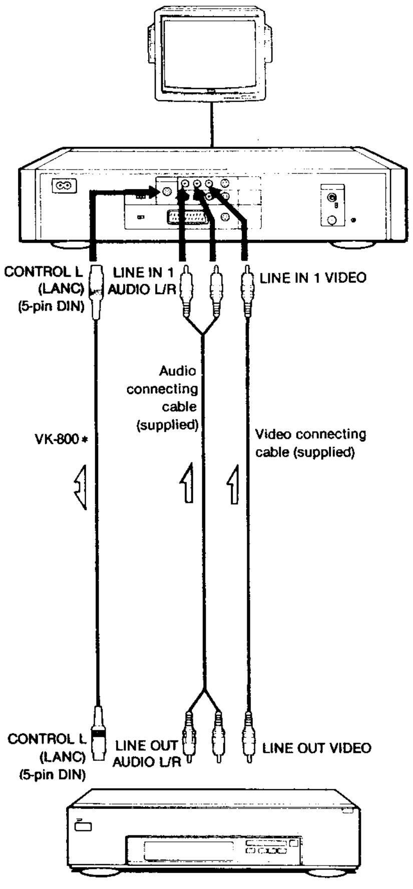
**7** **Release the EDIT SHUTTLE when the desired point is found.**
The recorder enters the recording pause mode.

**8** **Press SYNCHRO EDIT.**
The player will start playback and the recorder starts recording.

**9** **Press SYNCHRO EDIT at the edit end point.**
The player will enter the playback pause mode and the recorder enters the recording pause mode.

**To edit more scenes**
Repeat steps **4** to **9**.

**When editing is completed**
Press EDIT STANDBY. Both units will stop and the EDIT MONITOR display will return to the TV programme screen.


CONTROL L (LANC) (5-pin DIN)
LINE IN 1 AUDIO L/R
LINE IN 1 VIDEO
Audio connecting cable (supplied)
VK-800*
Video connecting cable (supplied)
CONTROL L (LANC) (5-pin DIN)
LINE OUT AUDIO L/R
LINE OUT VIDEO

## (2) Editing a Tape from a 8 mm or VHS VTR

### *Connection*

- Make connections referring to the illustration.
- If the other VTR is equipped with an S VIDEO output connector, make the connection.
- If the player is a monaural type, make connections with the optional RK-C71 audio connecting cable.

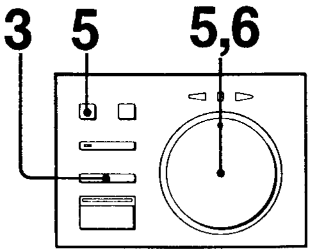
### *Preparation*

**On the other VTR = player**

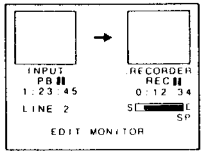
- Activate the EDIT mode if it is available.
- Select LANC MODE S or the equivalent if selection is available.

**On this VTR = recorder**

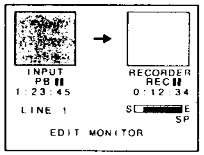
- Select LANC MODE M in the MODE SET menu (page 30).
- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).
- Check the other VTR and select SHUTTLE MODE A or B in the MODE SET menu (page 30).



3

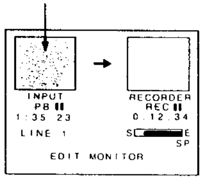

INPUT
PB II
1:23:45
LINE 2
RECORDER
REC II
0:12:34
SP
EDIT MONITOR

4


INPUT
PB II
1:23:45
LINE 1
RECORDER
REC II
0:12:34
SP
EDIT MONITOR

5
6

Decide the edit point.


INPUT
PB II
1:35:23
LINE 1
RECORDER
REC II
0:12:34
SP
EDIT MONITOR

### *Operation*

1 **Turn on the power to both units.**

2 **Insert a source tape into the player. Insert a tape for recording into the recorder.**

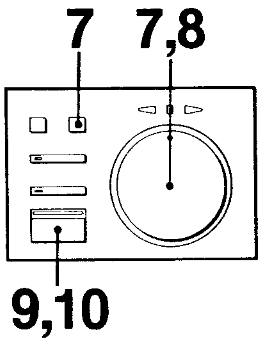
3 **Press EDIT STANDBY on the recorder.**
The EDIT MONITOR screen will be displayed.
The PLAYER control button will be turned on.
The recorder enters the recording pause mode.
The player enters the playback pause mode.

4 **Press INPUT SELECT to change the input source display from LINE 2 to LINE 1.**

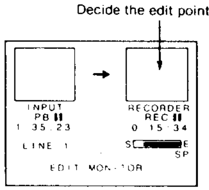
5 **Check that the PLAYER control button is turned on and turn the EDIT SHUTTLE to locate the start point of the player.**
The available playback speeds are: REVIEW, PB II (when EDIT SHUTTLE is released), × 1/5 (slow forward), PB (normal speed forward), and CUE.

**Note**
× 1/5 speed playback on the other VTR is controllable if × 1/5 speed playback is available on the other VTR.

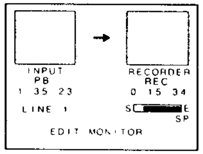
6 **Release the EDIT SHUTTLE when the desired point is found.**
The player enters the playback pause mode.



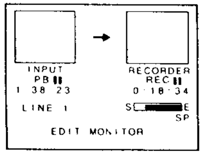
**7**
**8**


Decide the edit point.
INPUT
PB ▮▮
1 35 23
LINE 1
RECORDER
REC ▮▮
0 15 34
S E
SP
EDIT MONITOR

**9**


INPUT
PB
1 35 23
LINE 1
RECORDER
REC
0 15 34
S E
SP
EDIT MONITOR

**10**


INPUT
PB ▮▮
1 38 23
LINE 1
RECORDER
REC ▮▮
0 18 34
S E
SP
EDIT MONITOR

7 **Press RECORDER control button to turn it on and turn the EDIT SHUTTLE to locate the start point of the recorder.**
The available playback speeds are: REVIEW, − ×1 (normal speed reverse), REC ▮▮ (when the EDIT SHUTTLE is released), ×1/5 (slow forward), ×1 (normal speed forward), and CUE.

8 **Release the EDIT SHUTTLE when the desired point is found.**
The recorder enters the recording pause mode.

9 **Press SYNCHRO EDIT.**
The player will start playback and the recorder starts recording.

10 **Press SYNCHRO EDIT at the edit end point.**
The player will enter the playback pause mode and the recorder enters the recording pause mode.

---

**To edit more scenes**
Repeat steps **4** to **10**.

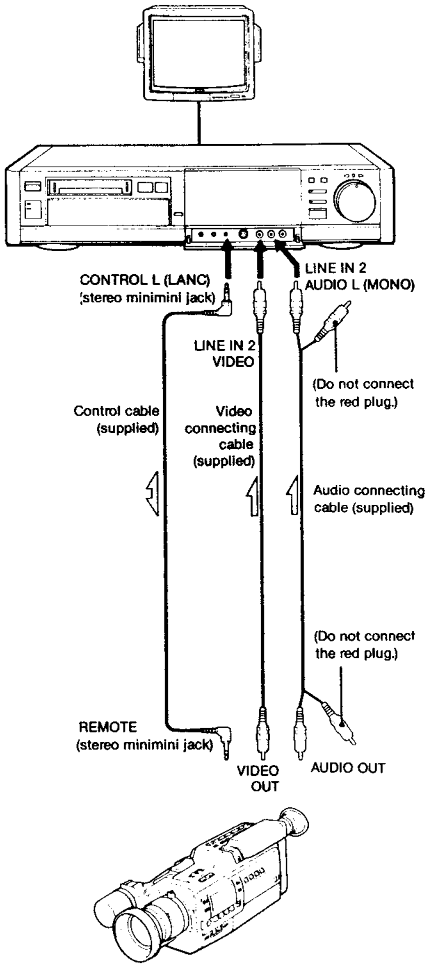
---

**When editing is completed**
Press EDIT STANDBY.
Both units will stop and the EDIT MONITOR display will return to the TV programme screen.

---

**To connect the player to LINE IN 2**
Use the optional VK-810 connecting cable (5-pin DIN to stereo minimini jack) for the CONTROL L LANC connection. The operation will be the same as that in "(1) Editing a Tape from a 8 mm Camera Recorder."

## Insert Editing


CONTROL L (LANC)
(stereo minimini jack)
LINE IN 2
AUDIO L (MONO)
LINE IN 2
VIDEO
(Do not connect the red plug.)
Control cable (supplied)
Video connecting cable (supplied)
Audio connecting cable (supplied)
(Do not connect the red plug.)
REMOTE
(stereo minimini jack)
VIDEO OUT
AUDIO OUT

### (1) Inserting Scenes from a 8 mm Camera Recorder

***Connection***
- Make connections referring to the illustration.
- If the camera recorder is equipped with an S VIDEO output connector, make the connection.
- If the other VTR is a monaural type, connect the white plug to the other VTR's audio output jack and the white plug on the other end to the LINE IN 2 AUDIO L (MONO) jack of this VTR.

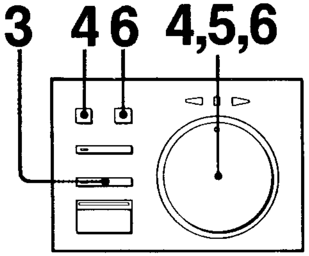
***Preparation***

---

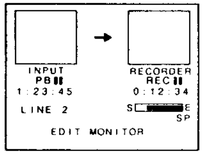
**On the other VTR = player**
- Activate the EDIT mode if it is available.
- Select LANC MODE S or the equivalent if selection is available.

---

**On this VTR = recorder**
- Select LANC MODE M in the "MODE SET menu" (page 30).
- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).
- Check the other VTR and select SHUTTLE MODE A or B in the MODE SET menu (page 30).

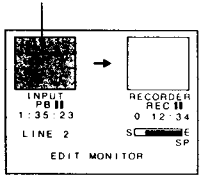


3


INPUT
PB II
1:23:45
LINE 2
RECORDER
REC II
0:12:34
S E
SP
EDIT MONITOR

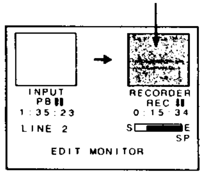
4
5

Decide the edit point.


INPUT
PB II
1:35:23
LINE 2
RECORDER
REC II
0:12:34
S E
SP
EDIT MONITOR

6

Decide the insert end point.


INPUT
PB II
1:35:23
LINE 2
RECORDER
REC II
0:15:34
S E
SP
EDIT MONITOR

*Operation*

**1** **Turn on the power to both units.**

**2** **Insert a source tape into the player. Insert a tape for recording into the recorder.**

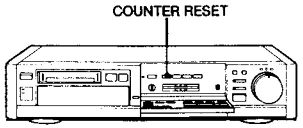
**3** **Press EDIT STANDBY on the recorder.**
The EDIT MONITOR screen will be displayed. LINE 2 will automatically be selected for the player. The PLAYER control button will be turned on. The recorder enters the recording pause mode. The player enters the playback pause mode.

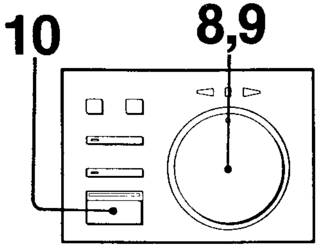
**4** **Check that the PLAYER control button is turned on and turn the EDIT SHUTTLE to locate the start point of the player.**
The available playback speeds are: REVIEW, PB II (when EDIT SHUTTLE is released), × 1/5 (slow forward), PB (normal speed forward), and CUE.

**Note**
× 1/5 speed playback on the other VTR is controllable if × 1/5 speed playback is available on the other VTR.

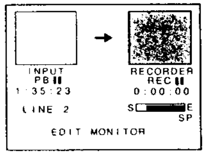
**5** **Release the EDIT SHUTTLE when the desired point is found.**
The player enters the playback pause mode.

**6** **Press RECORDER control button to turn it on and turn the EDIT SHUTTLE to locate where insertion should end.**
The available playback speeds are: REVIEW, – × 1 (normal speed reverse), REC II (when the EDIT SHUTTLE is released), × 1/5 (slow forward), × 1 (normal speed forward), and CUE.


COUNTER RESET

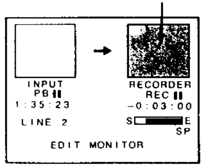


7

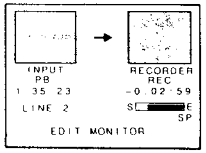

INPUT
PB II
1:35:23
LINE 2
RECORDER
REC II
0:00:00
S E
SP
EDIT MONITOR

8
9

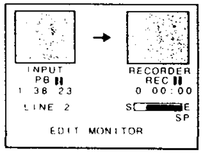
Decide the insert start point.


INPUT
PB II
1:35:23
LINE 2
RECORDER
REC II
-0:03:00
S E
SP
EDIT MONITOR

10


INPUT
PB
1:35:23
LINE 2
RECORDER
REC
-0:02:59
S E
SP
EDIT MONITOR

11


INPUT
PB II
1:38:23
LINE 2
RECORDER
REC II
0:00:00
S E
SP
EDIT MONITOR

**7** **Press COUNTER RESET.**
The tape counter for the recorder will be 0H00M00S.

**8** **Turn the EDIT SHUTTLE to rewind the tape to locate where the insertion should start on the recorder.**

**9** **Release the EDIT SHUTTLE when the desired point is found.**
The recorder enters the recording pause mode.

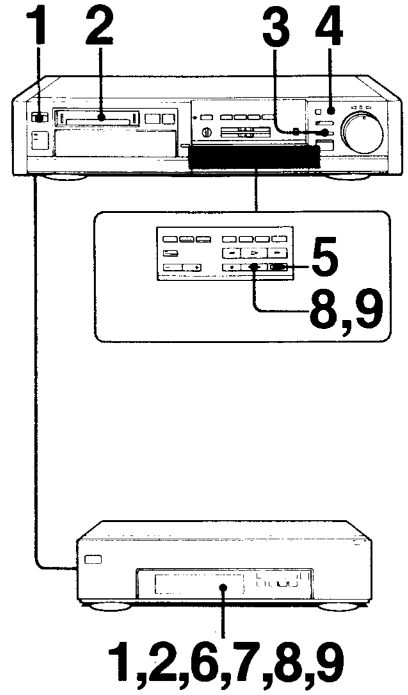
**10** **Press SYNCHRO EDIT.**
The player will start playback and the recorder starts recording.

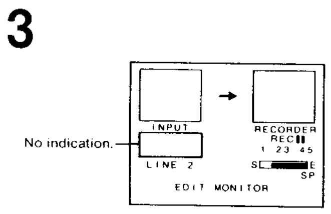
**11** **Recording will stop when the counter reaches zero.**
The player will enter the playback pause mode and the recorder enters the recording pause mode.

**To edit more scenes**
Repeat steps **4** to **11**.

**When editing is completed**
Press EDIT STANDBY.
Both units will stop and the EDIT MONITOR display will return to the TV programme screen.

**Note during synchronized editing**
COUNTER RESET will not function.





### (1) Editing a Tape from Another VTR

*Connection*

- Make connections referring to the illustration in "Basic Editing (1) Editing a Tape from Another VTR" (page 79).

*Preparation*

**On the other VTR = player**

- Activate the EDIT mode if it is available.

**On this VTR = recorder**

- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).
- Select the line input that the player is connected to with INPUT SELECT.

*Operation*

1 **Turn on the power to both units.**

2 **Insert a source tape into the player. Insert a tape for recording into the recorder.**

3 **Press EDIT MONITOR on the recorder.**
The EDIT MONITOR screen will be displayed.

4 **Press RECORDER control button to turn it on and turn the EDIT SHUTTLE to locate the recording start point of the recorder.**
Releasing the EDIT SHUTTLE makes the recorder enter the playback pause mode.

5 **Press ● REC to make the recorder enter the recording pause mode.**

6 **Playback the player using the controls on the player and locate the playback start point.**

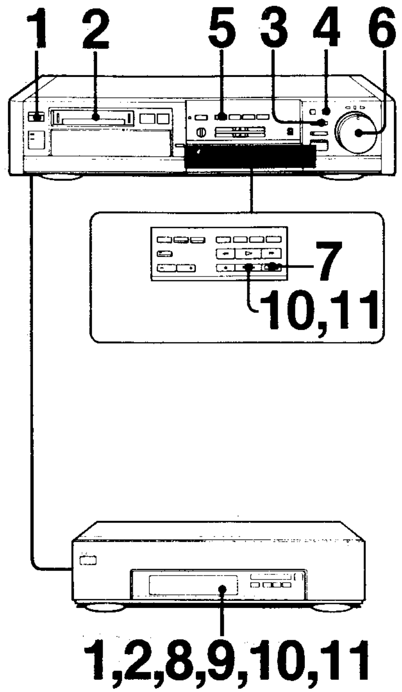
7 **Set the player in the playback pause mode.**

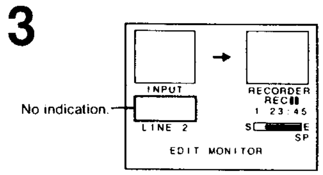
8 **Release the pause mode on both VTRs simultaneously.**
The player starts playback and the recorder starts recording.

9 **To stop recording, press II PAUSE on the recorder and then the player.**

**To edit more scenes**
Repeat steps **4** to **9**.

**When editing is completed**
Stop both VTRs.





### (1) Editing a Tape from Another VTR

*Connection*

- Make connections referring to the illustrations in "Basic Editing (1) Editing a Tape from Another VTR" (page 79).

*Preparation*

**On the other VTR = player**

- Activate the EDIT mode if it is available.

**On this VTR = recorder**

- Select the recording mode SP or LP with REC MODE.
- Adjust the recording level with REC LEVEL (page 52).
- Select the line input that the player is connected to with INPUT SELECT.

*Operation*

1 **Turn on the power to both units.**

2 **Insert a source tape into the player. Insert a tape for recording into the recorder.**

3 **Press EDIT MONITOR on the recorder.**
The EDIT MONITOR screen will be displayed.

4 **Press RECORDER control button to turn it on and turn the EDIT SHUTTLE to locate where the insertion should end.**

5 **Press COUNTER RESET.**
The tape counter for the recorder will be 0H00M00S.

6 **Turn the EDIT SHUTTLE to rewind the tape to locate where the insertion should start on the recorder.**
Releasing the EDIT SHUTTLE makes the recorder enter the playback pause mode.

7 **Press ● REC to set the recorder in the recording pause mode.**

8 **Playback the player using the controls on the player and locate the playback start point.**

9 **Set the player in the playback pause mode.**

10 **Release the pause mode on both VTRs simultaneously.**
The player starts playback and the recorder starts recording.

11 **Set the recorder in the recording pause mode when the counter reaches zero. Set the player in the playback pause mode.**

**To edit more scenes**
Repeat steps **4** to **11**.

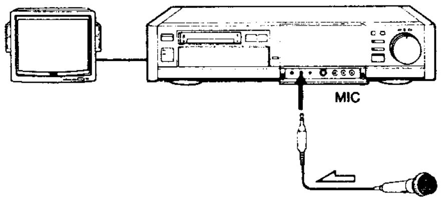
**When editing is completed**
Stop both VTRs.

# Audio Dubbing

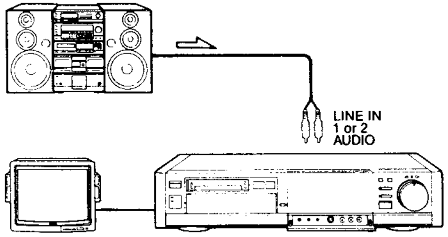
You can additionally record music or narration on a pre-recorded tape while watching the playback picture of the tape. Audio dubbed sound will be recorded on the PCM track.

## Connection

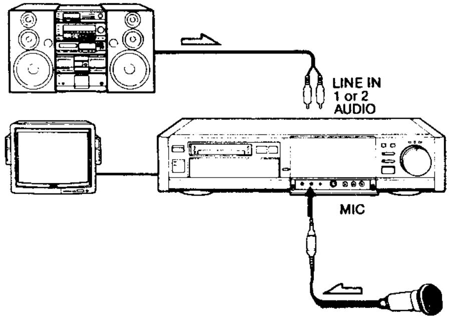
*To dub the sound from the microphone*



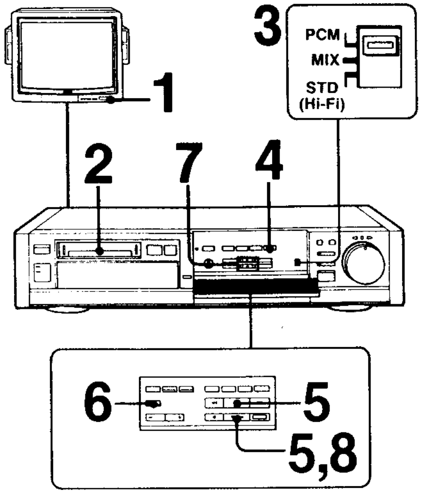
*To dub to sound from the audio system*

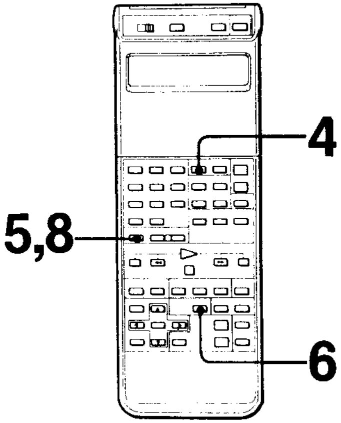


*To dub the sound from both the microphone and the audio system*



**Note**
A plug-in power microphone cannot be used with this VTR.





## Operation

1. **Turn on the TV and select the input for the VTR or select the programme position for the VTR.**
2. **Insert a cassette.**
   The power will automatically be tured on.
3. **Set the AUDIO MONITOR switch to PCM or MIX.**
4. **When dubbing the sound from the audio system, select the line input that the audio system is connected to by pressing INPUT SELECT.**
5. **Playback the tape to locate the point where the audio dubbing should start and press PAUSE/STILL II/►◄ or II PAUSE.**
6. **Press AUDIO DUB.**
   The AUDIO DUB indicator on the VTR will turn on.
7. **Playback the audio sources and adjust the REC LEVEL.**
8. **Press PAUSE/STILL II/►◄ or II PAUSE again to release the playback pause mode.**
   Audio dubbing will start.

*To stop audio dubbing momentarily*
Press PAUSE/STILL II/►◄ or II PAUSE.

*To stop audio dubbing*
Press ■ STOP.

*To dub the sound from a TV programme*
Press INPUT SELECT to display TUNER indicator and select the desired programme position. Then proceed with steps 2 to 5.

**Notes**
- During dubbing, a black band or picture noise appears in the center and lower portions of the screen, but the recorded picture will not be affected.
- The audio dubbed sound cannot be played back on a VTR or a video camera recorder without the PCM recording/playback function.

# SECTION 3
# DISASSEMBLY

**Note:** Follow the disassembly procedure in the numerical order given.

## 3-1. REMOVAL OF FRONT PANEL, CASE UPPER, PLATE BOTTOM

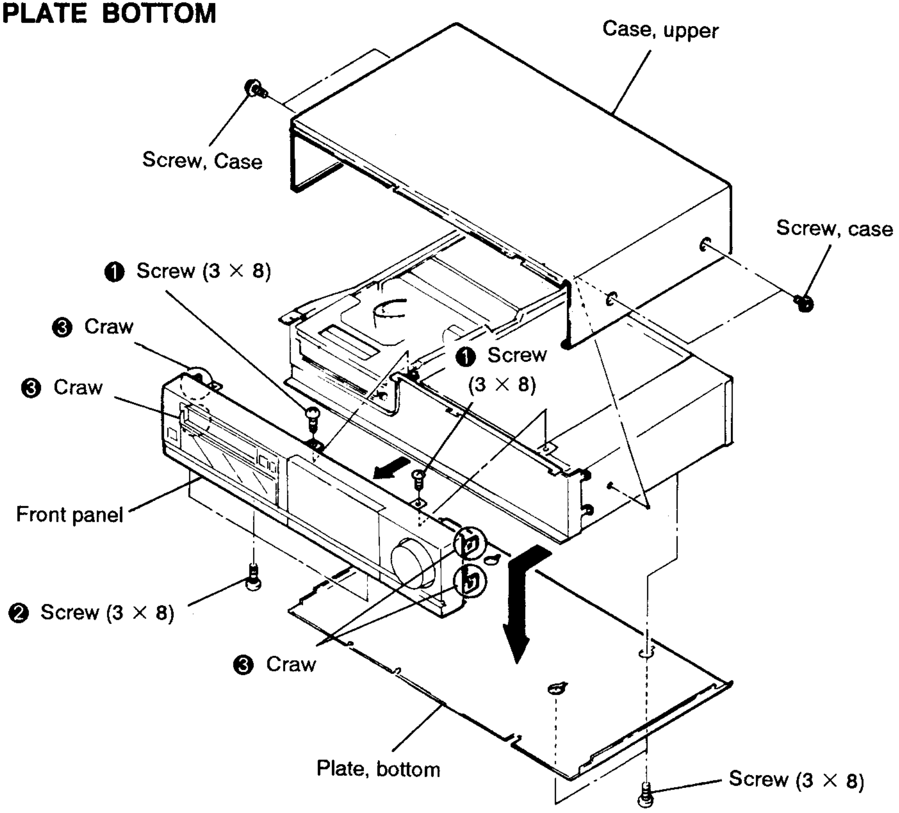

Case, upper
Screw, Case
Screw, case
❶ Screw (3 × 8)
❸ Craw
❸ Craw
❶ Screw (3 × 8)
Front panel
❷ Screw (3 × 8)
❸ Craw
Plate, bottom
Screw (3 × 8)

Fig. 3-1.

## 3-2. REMOVAL OF VI-65, PC-39, YC-64, FR-41, FJ-2 BOARDS

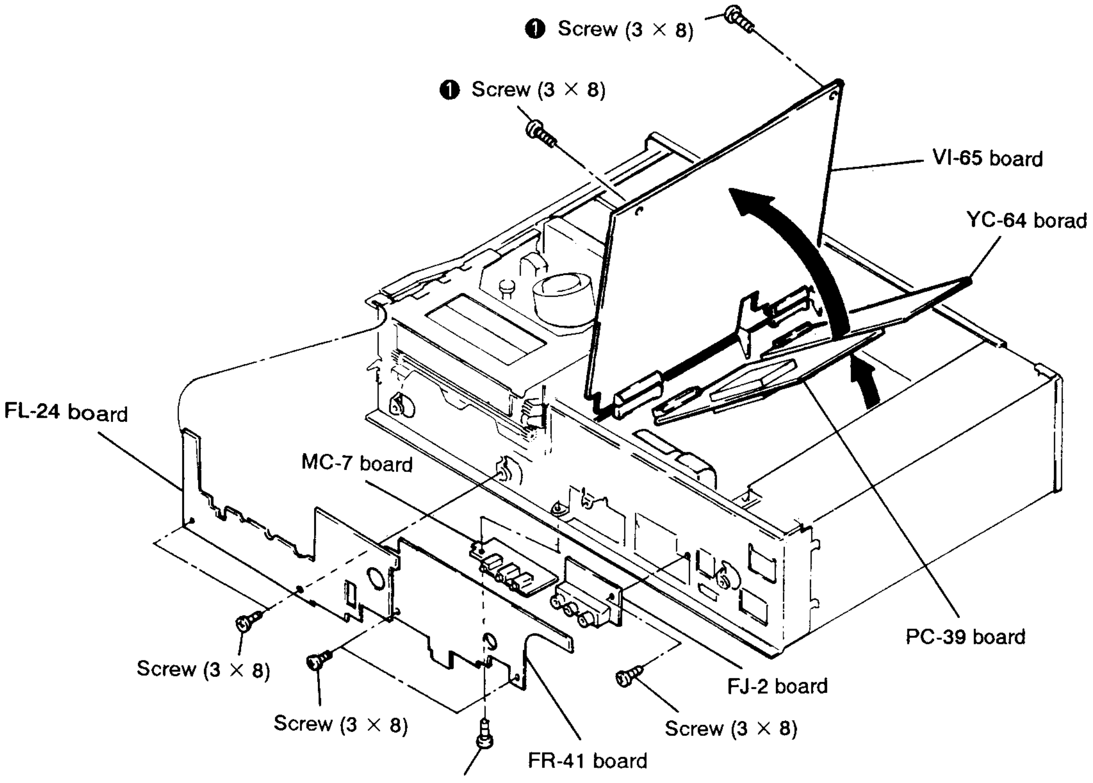

❶ Screw (3 × 8)
❶ Screw (3 × 8)
VI-65 board
YC-64 borad
FL-24 board
MC-7 board
PC-39 board
Screw (3 × 8)
Screw (3 × 8)
FJ-2 board
Screw (3 × 8)
FR-41 board
Screw (3 × 8)

Fig. 3-2.

## 3-3. REMOVING BOARDS CONNECTED BY A BOARD-TO-BOARD CONNECTOR

**Example:** Removing the VI-65 board from the IN-24 board.

1) Stand the VI-65 board as shown in Fig. 3-3. Ⓐ.
2) As shown in Fig. 3-3. Ⓑ, pull out the VI-65 board at a 20° angle from the IN-24 board.
3) Remove the PC-39 board, YC-64 board or other board in the same way.
4) To reinstall the board, align the connectors as shown in Fig. 3-3. Ⓒ, then insert the board.

**Note:** Pulling out the board forcefully may damage the connector or pattern. Therefore use care when removing the board.

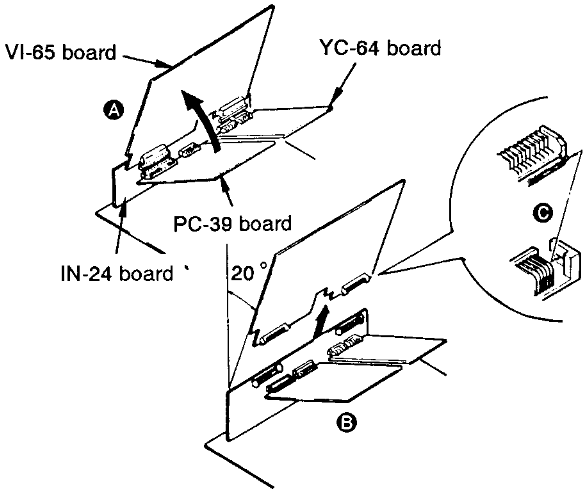

VI-65 board
YC-64 board
Ⓐ
PC-39 board
Ⓒ
IN-24 board
20°
Ⓑ

Fig. 3-3.

## 3-4. REMOVAL OF DS-35, TU-100, RP-74, IN-24, CM-15, PS-196 BOARDS

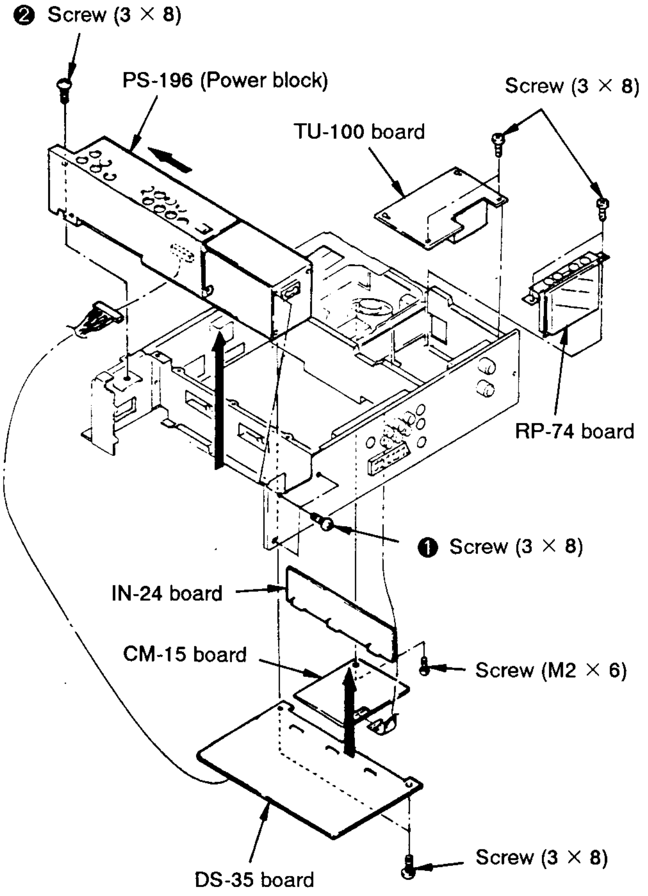

❷ Screw (3 × 8)
PS-196 (Power block)
Screw (3 × 8)
TU-100 board
RP-74 board
❶ Screw (3 × 8)
IN-24 board
CM-15 board
Screw (M2 × 6)
Screw (3 × 8)
DS-35 board

Fig. 3-4.

## 3-5. REMOVAL OF CC-26 BOARD

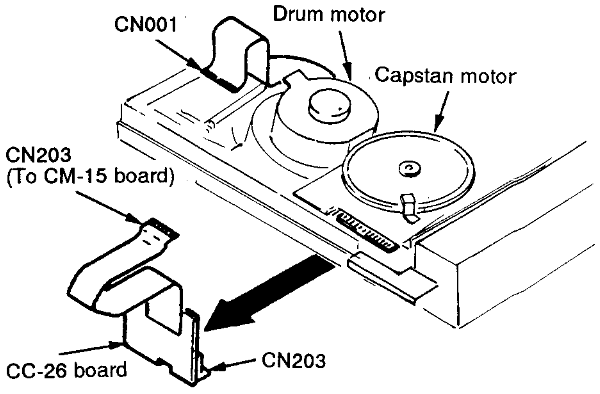

CN001
Drum motor
Capstan motor
CN203
(To CM-15 board)
CC-26 board
CN203

Fig. 3-5.

## 3-6. REMOVAL OF CM-15, UC-4 BOARDS

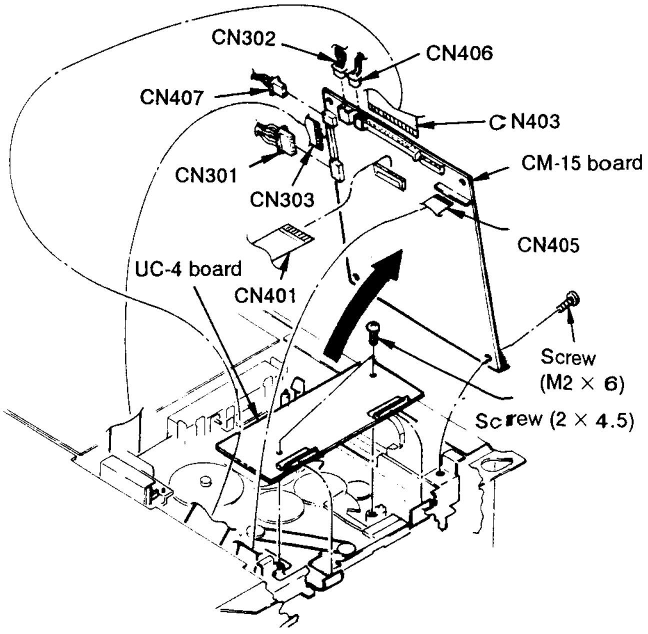

CN302
CN406
CN407
CN403
CN301
CM-15 board
CN303
CN405
UC-4 board
CN401
Screw
(M2 × 6)
Screw (2 × 4.5)

Fig. 3-6.

## 3-7. REMOVAL OF RJ-5, RJ-6 AND REAR FRAME, RF MODULATOR

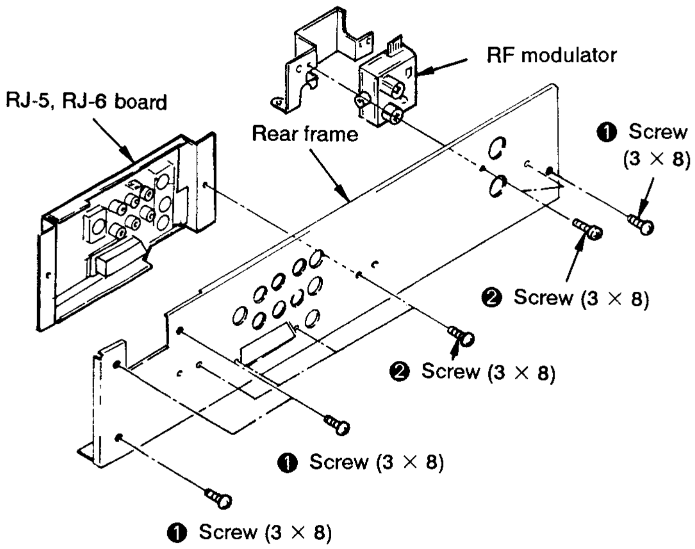

RF modulator
RJ-5, RJ-6 board
Rear frame
❶ Screw (3 × 8)
❷ Screw (3 × 8)
❷ Screw (3 × 8)
❶ Screw (3 × 8)
❶ Screw (3 × 8)

Fig. 3-7.

## 3-8. REMOVAL OF MD, CASSETTE COMPARTMENT BLOCK

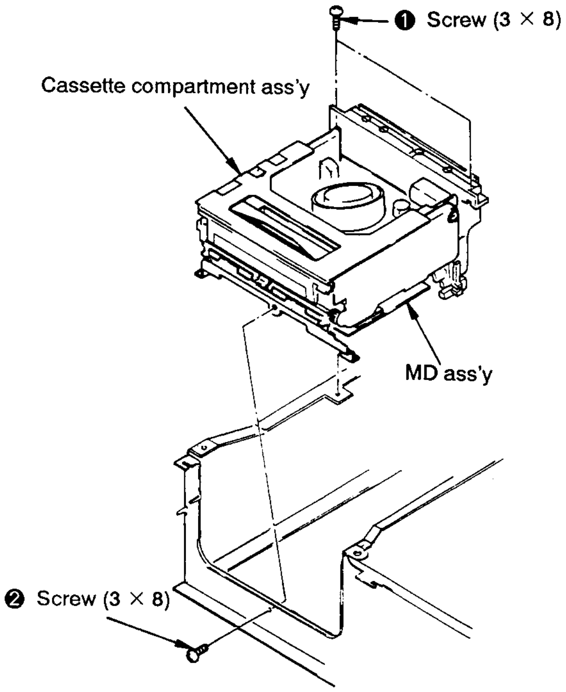

❶ Screw (3 × 8)
Cassette compartment ass'y
MD ass'y
❷ Screw (3 × 8)

Fig. 3-8.

## 3-9. REMOVAL OF MD SECTION

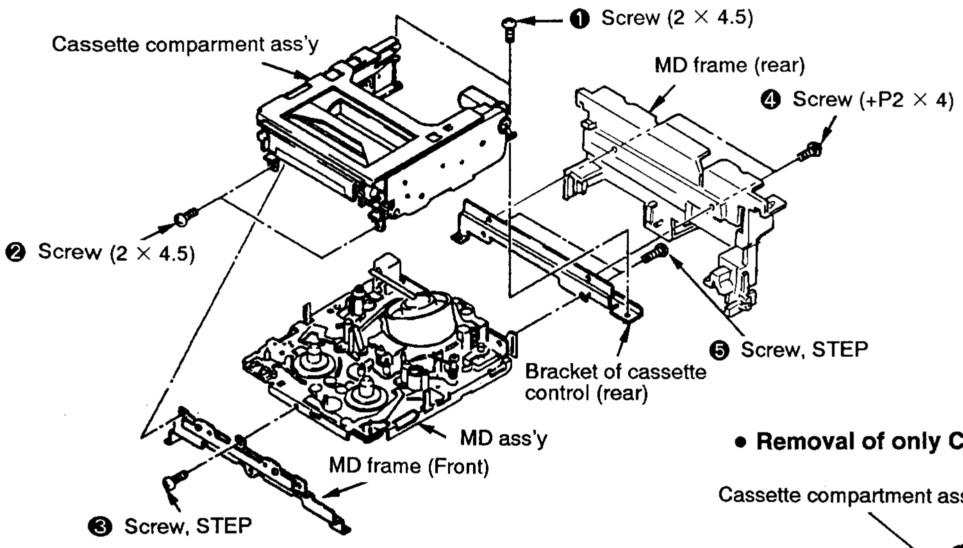
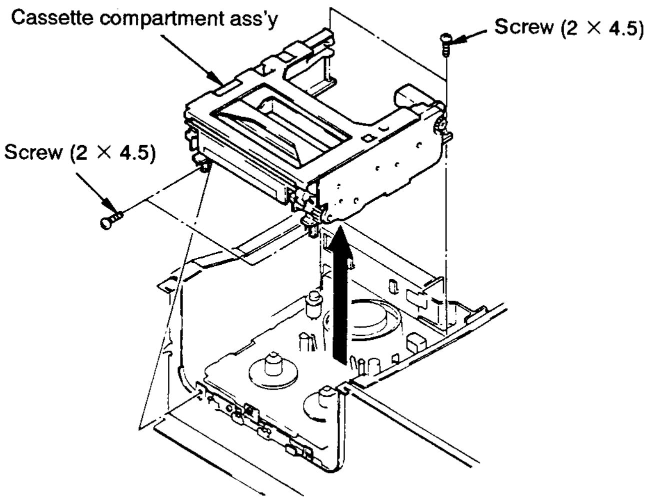

❶ Screw (2 × 4.5)
Cassette comparment ass'y
MD frame (rear)
❹ Screw (+P2 × 4)
❷ Screw (2 × 4.5)
❺ Screw, STEP
Bracket of cassette control (rear)
MD ass'y
MD frame (Front)
❸ Screw, STEP

Fig. 3-9.

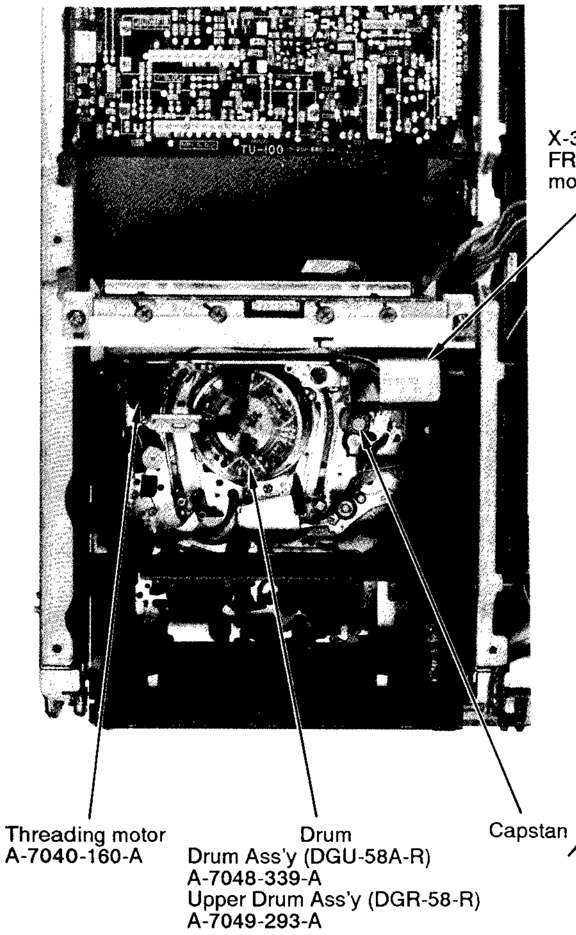
- Notes for cassette compartment ass'y installation.
- For the installation procedure, see page 8.

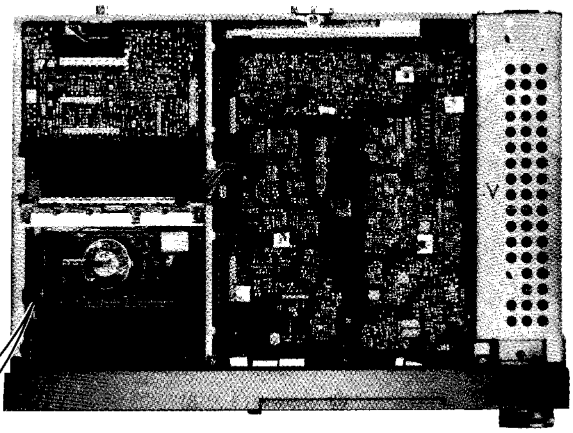
### • Removal of only Cassette Compartment Assy


Cassette compartment ass'y
Screw (2 × 4.5)
Screw (2 × 4.5)

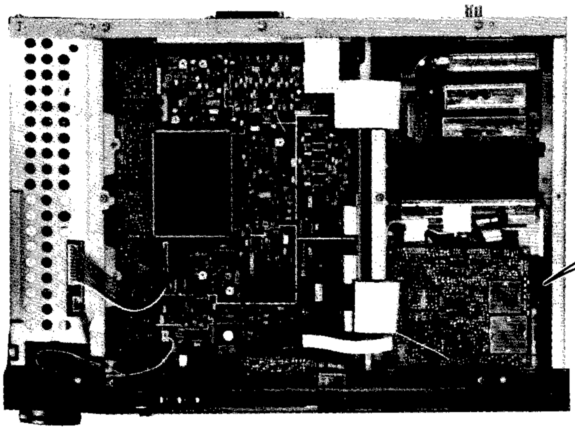
## 3-10. INTERNAL VIEWS

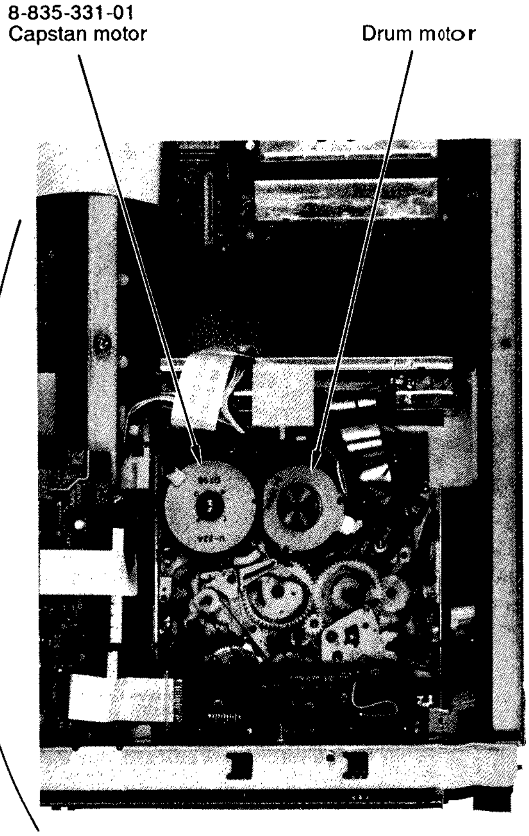
### – Upper Side –


X-3731-108-1
FRONT Loading
motor
Threading motor
A-7040-160-A
Drum
Drum Ass'y (DGU-58A-R)
A-7048-339-A
Upper Drum Ass'y (DGR-58-R)
A-7049-293-A
Capstan
TU-100



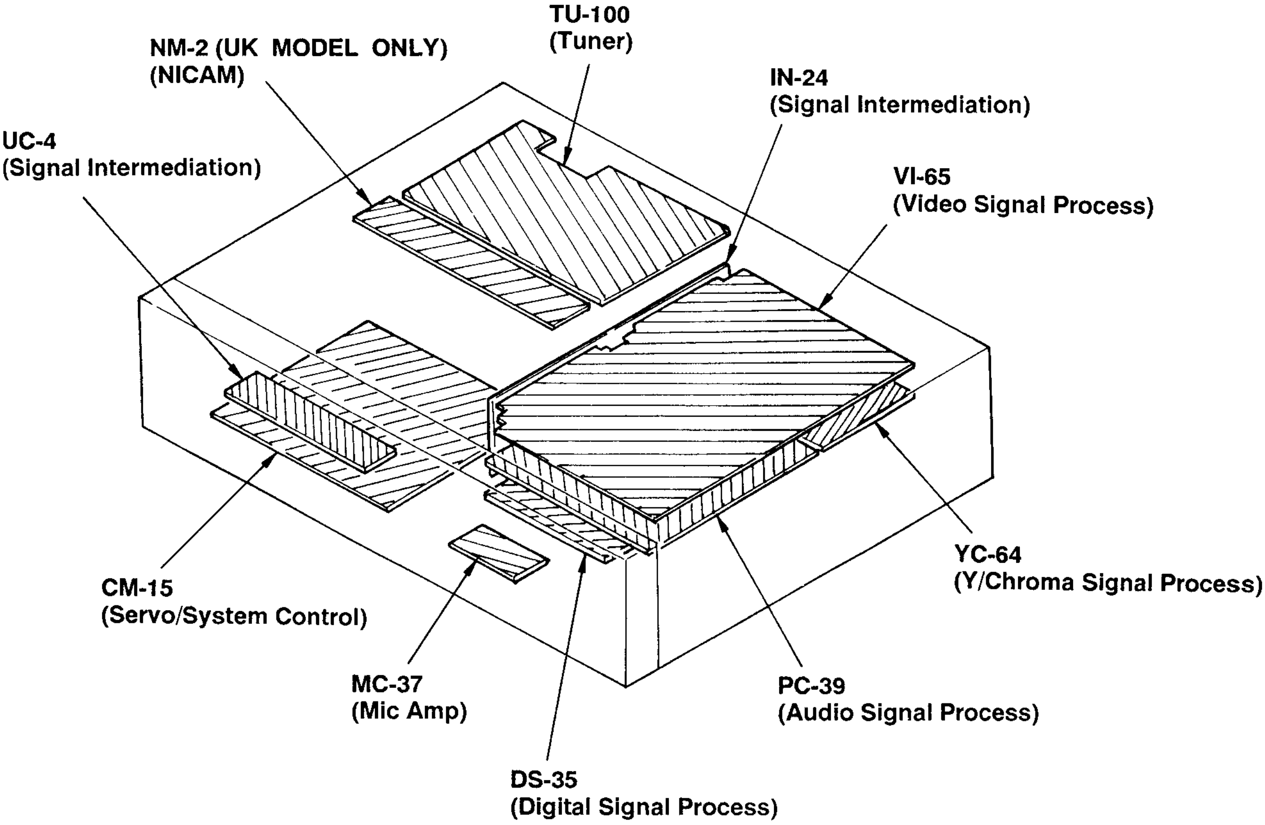
### – Bottom Side –

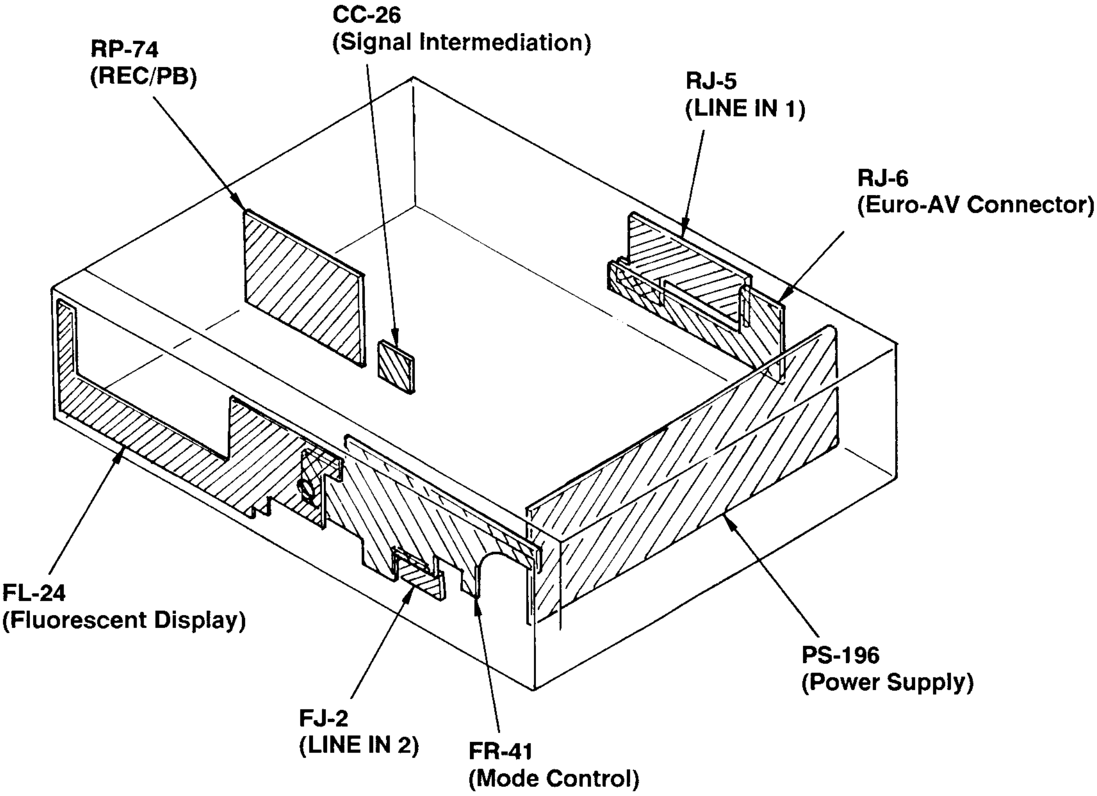



8-835-331-01
Capstan motor
Drum motor

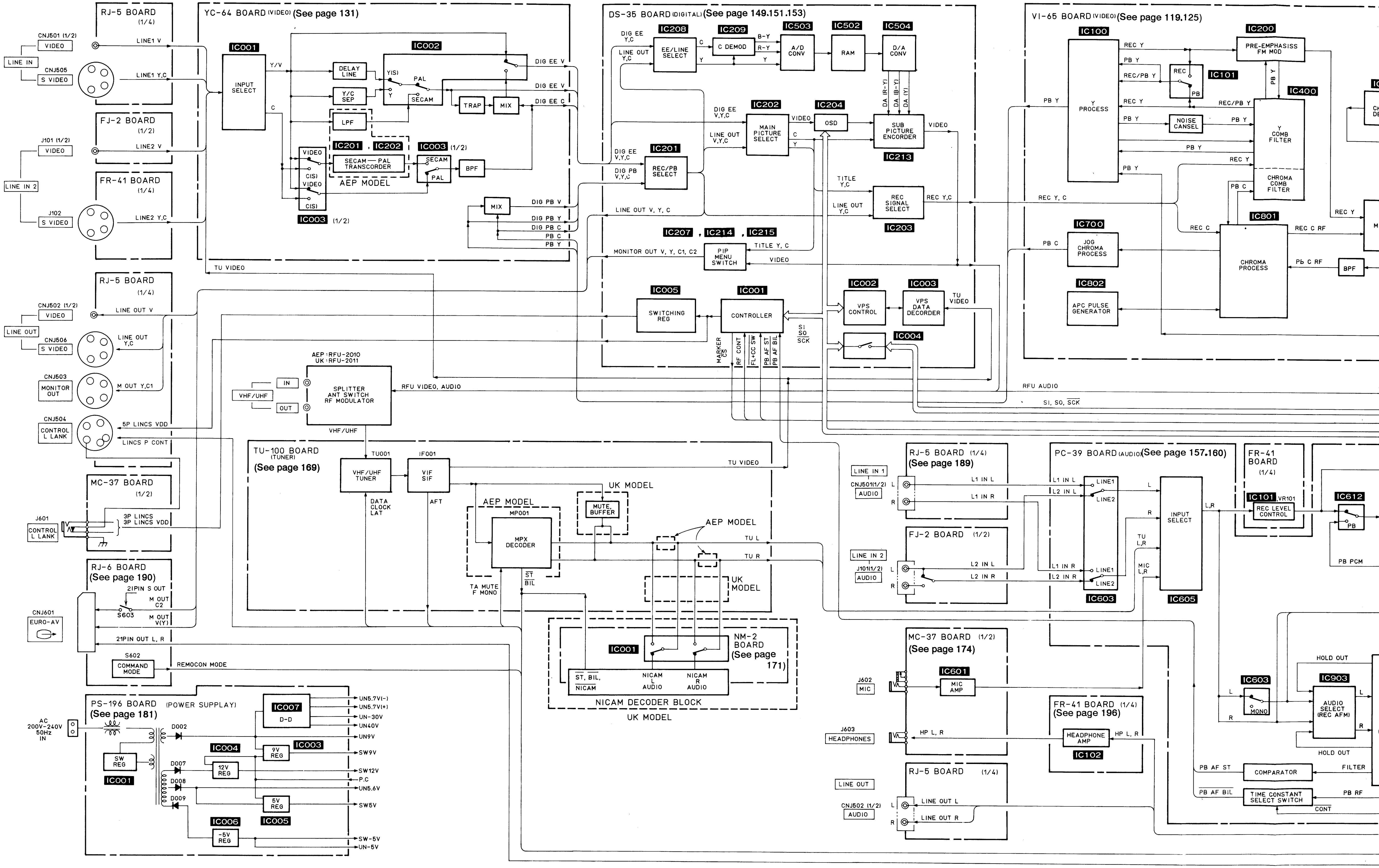
# SECTION 4
# DIAGRAMS

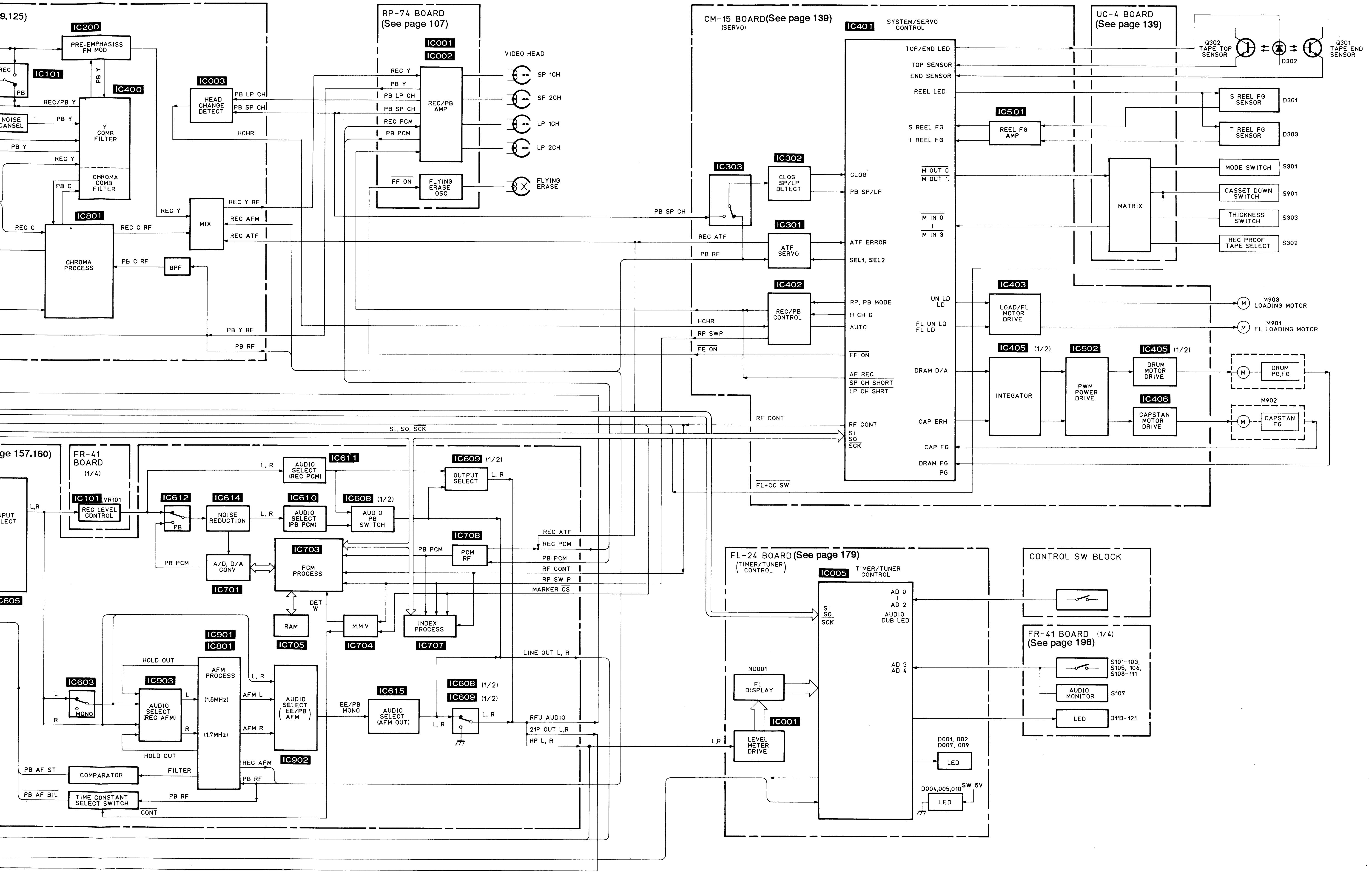
## 4-1. CIRCUIT BOARDS LOCATION


TU-100
(Tuner)
NM-2 (UK MODEL ONLY)
(NICAM)
IN-24
(Signal Intermediation)
UC-4
(Signal Intermediation)
VI-65
(Video Signal Process)
YC-64
(Y/Chroma Signal Process)
CM-15
(Servo/System Control)
MC-37
(Mic Amp)
PC-39
(Audio Signal Process)
DS-35
(Digital Signal Process)

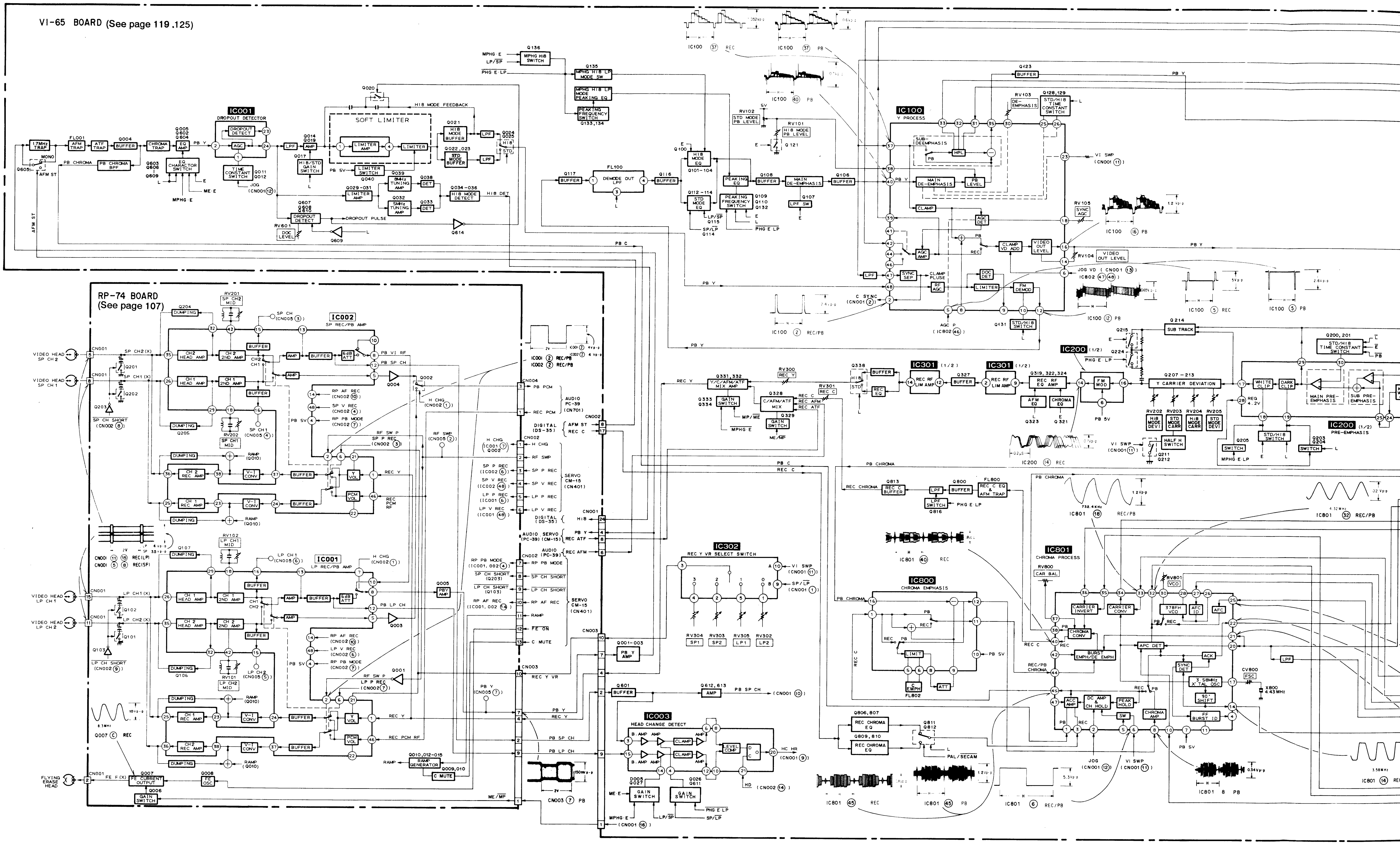

CC-26
(Signal Intermediation)
RP-74
(REC/PB)
RJ-5
(LINE IN 1)
RJ-6
(Euro-AV Connector)
FL-24
(Fluorescent Display)
PS-196
(Power Supply)
FJ-2
(LINE IN 2)
FR-41
(Mode Control)

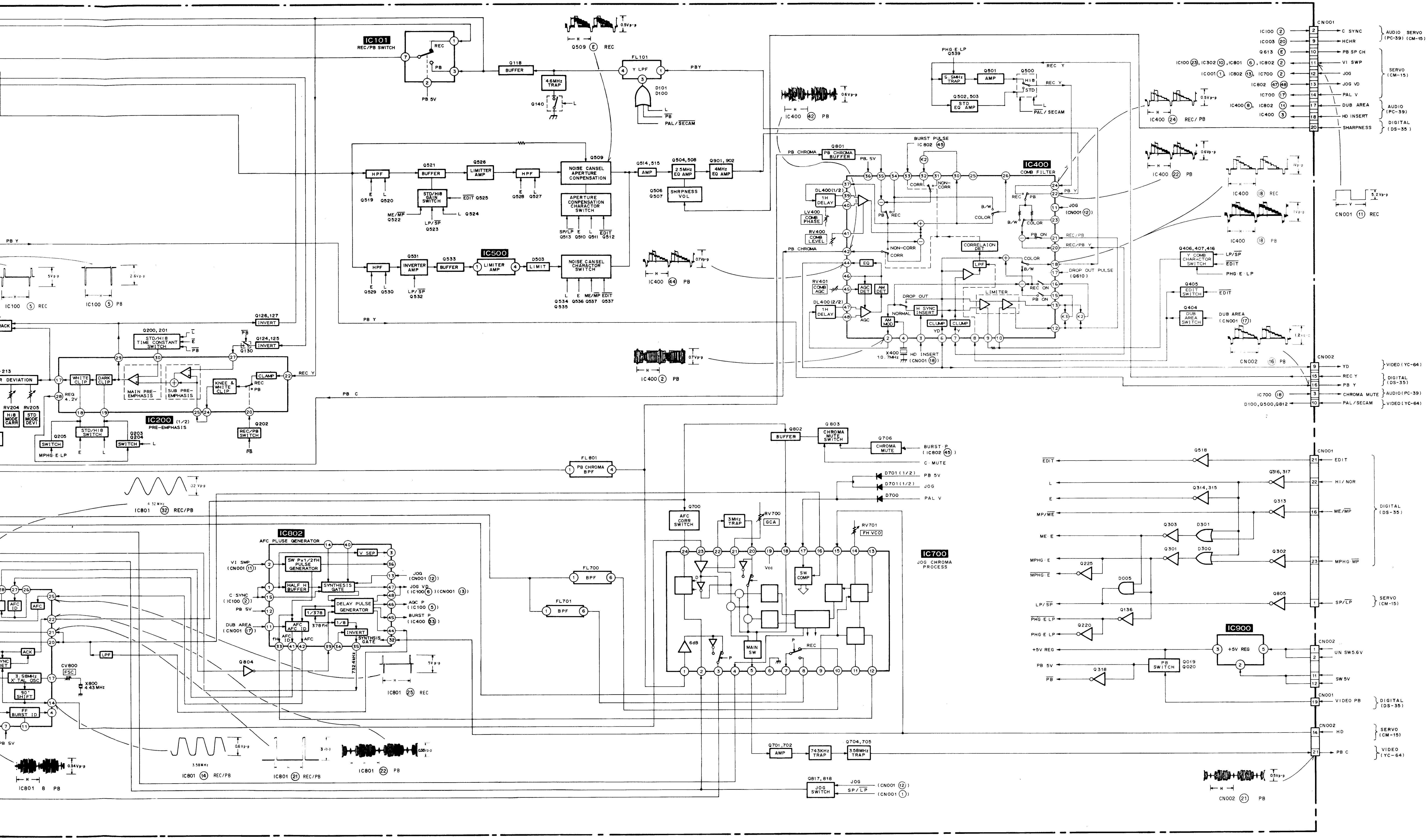
## 4-2. OVERALL BLOCK DIAGRAM


RJ-5 BOARD (1/4)
CNJ501 (1/2) VIDEO
LINE IN
CNJ505 S VIDEO
LINE1 V
LINE1 Y,C
FJ-2 BOARD (1/2)
J101 (1/2) VIDEO
LINE2 V
LINE IN 2
FR-41 BOARD (1/4)
J102 S VIDEO
LINE2 Y,C
RJ-5 BOARD (1/4)
CNJ502 (1/2) VIDEO
LINE OUT
CNJ506 S VIDEO
LINE OUT V
LINE OUT Y,C
CNJ503 MONITOR OUT
M OUT Y,C1
CNJ504 CONTROL L LANK
5P LINCS VDD
LINCS P CONT
MC-37 BOARD (1/2)
J601 CONTROL L LANK
3P LINCS
3P LINCS VDD
RJ-6 BOARD (See page 190)
21PIN S OUT
M OUT C2
S603
M OUT V(Y)
CNJ601 EURO-AV
21PIN OUT L, R
S602 COMMAND MODE
REMOCON MODE
PS-196 BOARD (POWER SUPPLY) (See page 181)
AC 200V-240V 50Hz IN
SW REG
IC001
D002
D007
D008
D009
IC007 D-D
IC004 12V REG
IC003 9V REG
IC005 5V REG
IC006 -5V REG
UN5.7V(-)
UN5.7V(+)
UN-30V
UN40V
UN9V
SW9V
SW12V
P.C
UN5.6V
SW5V
SW-5V
UN-5V
YC-64 BOARD (VIDEO) (See page 131)
IC001 INPUT SELECT
Y/V
C
DELAY LINE
Y/C SEP
LPF
IC002
Y(S)
PAL
SECAM
TRAP
MIX
DIG EE V
DIG EE C
IC201 , IC202 SECAM — PAL TRANSCODER
IC003 (1/2) SECAM PAL
BPF
AEP MODEL
VIDEO
C(S)
IC003 (1/2)
MIX
DIG PB V
DIG PB Y
DIG PB C
PB C
PB Y
TU VIDEO
AEP : RFU-2010
UK : RFU-2011
IN
OUT
VHF/UHF
SPLITTER ANT SWITCH RF MODULATOR
RFU VIDEO, AUDIO
TU-100 BOARD (TUNER) (See page 169)
TU001 VHF/UHF TUNER
IF001 VIF SIF
DATA CLOCK LAT
AFT
TU VIDEO
AEP MODEL
MP001 MPX DECODER
TA MUTE F MONO
ST BIL
UK MODEL
MUTE, BUFFER
AEP MODEL
TU L
TU R
UK MODEL
NM-2 BOARD (See page 171)
IC001
ST, BIL, NICAM
NICAM L AUDIO
NICAM R AUDIO
NICAM DECODER BLOCK
UK MODEL
DS-35 BOARD (DIGITAL) (See page 149.151.153)
DIG EE Y,C
LINE OUT Y,C
IC208 EE/LINE SELECT
IC209 C DEMOD
B-Y
R-Y
IC503 A/D CONV
IC502 RAM
IC504 D/A CONV
DA (R-Y)
DA (B-Y)
DA (Y)
DIG EE V,Y,C
LINE OUT V,Y,C
IC202 MAIN PICTURE SELECT
IC204 OSD
SUB PICTURE ENCORDER
IC213
VIDEO
DIG EE V,Y,C
DIG PB V,Y,C
IC201 REC/PB SELECT
TITLE Y,C
LINE OUT Y,C
REC SIGNAL SELECT
IC203
REC Y,C
LINE OUT V, Y, C
IC207 , IC214 , IC215
PIP MENU SWITCH
MONITOR OUT V, Y, C1, C2
TITLE Y, C
IC005 SWITCHING REG
IC001 CONTROLLER
MARKER CS
RF CONT
FL+CC SW
PB AF ST
PB AF BIL
SI SO SCK
IC002 VPS CONTROL
IC003 VPS DATA DECORDER
TU VIDEO
IC004
RFU AUDIO
SI, SO, SCK
VI-65 BOARD (VIDEO) (See page 119.125)
IC100 Y PROCESS
PB Y
REC Y
REC/PB Y
REC
PB
IC101
NOISE CANSEL
IC200 PRE-EMPHASISS FM MOD
IC400 Y COMB FILTER
CHROMA COMB FILTER
REC/PB Y
PB C
REC Y, C
IC700 JOG CHROMA PROCESS
IC801 CHROMA PROCESS
REC C
REC C RF
Pb C RF
BPF
IC802 APC PULSE GENERATOR
RJ-5 BOARD (1/4) (See page 189)
LINE IN 1
CNJ501(1/2) AUDIO
L1 IN L
L1 IN R
FJ-2 BOARD (1/2)
LINE IN 2
J101(1/2) AUDIO
L2 IN L
L2 IN R
PC-39 BOARD (AUDIO) (See page 157.160)
LINE1
LINE2
IC603
IC605 INPUT SELECT
TU L,R
MIC L,R
L,R
FR-41 BOARD (1/4)
IC101 , VR101 REC LEVEL CONTROL
IC612
PB
PB PCM
MC-37 BOARD (1/2) (See page 174)
J602 MIC
IC601 MIC AMP
J603 HEADPHONES
HP L, R
FR-41 BOARD (1/4) (See page 196)
HEADPHONE AMP
IC102
RJ-5 BOARD (1/4)
LINE OUT
CNJ502 (1/2) AUDIO
LINE OUT L
LINE OUT R
IC603 MONO
IC903 AUDIO SELECT (REC AFM)
HOLD OUT
PB AF ST
COMPARATOR
FILTER
PB AF BIL
TIME CONSTANT SELECT SWITCH
PB RF
CONT

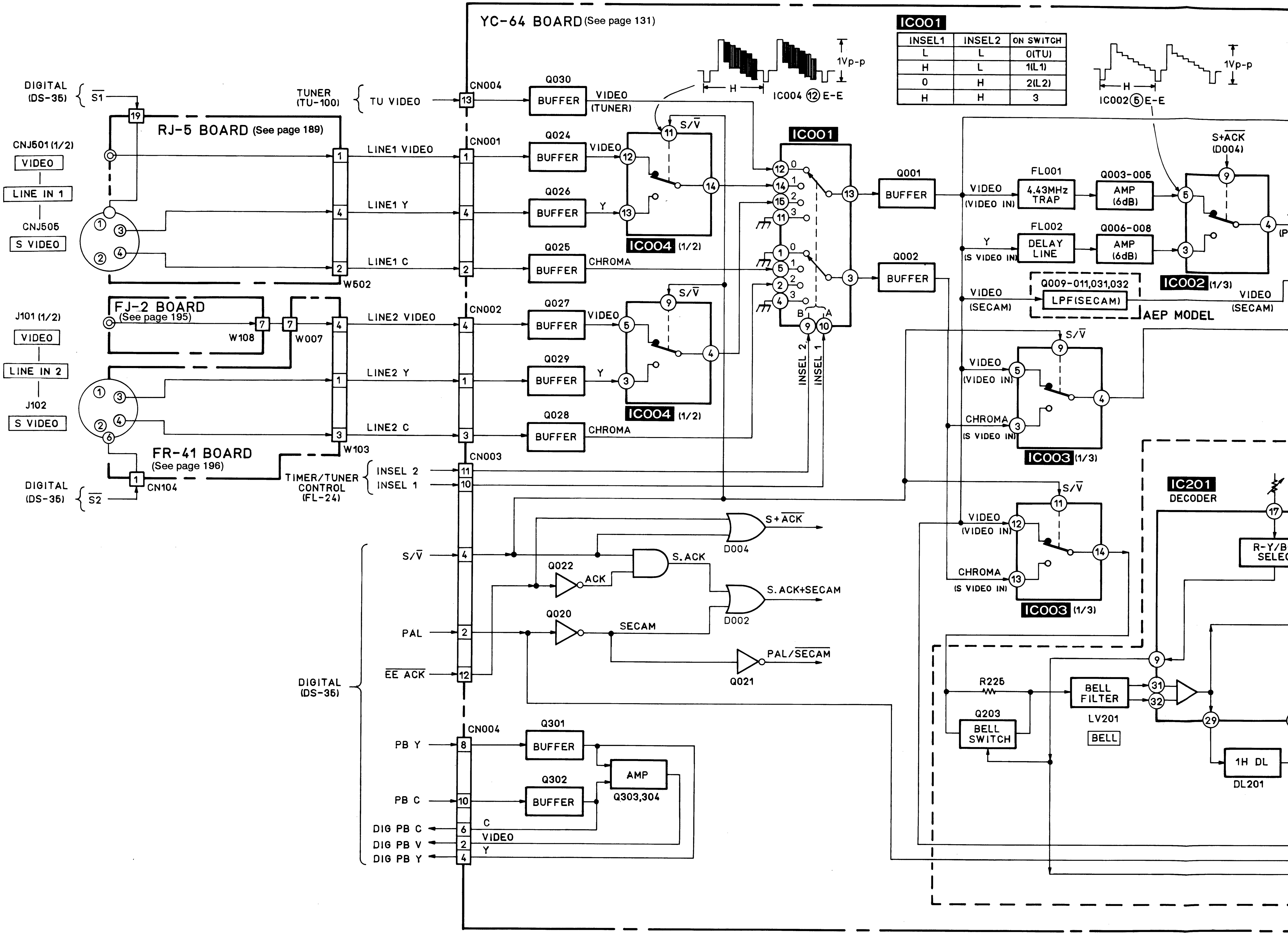

9.125)
IC200
PRE-EMPHASISS FM MOD
REC
PB
IC101
PB Y
IC400
REC/PB Y
NOISE CANSEL
PB Y
Y COMB FILTER
PB Y
REC Y
CHROMA COMB FILTER
PB C
IC801
REC C
REC C RF
CHROMA PROCESS
Pb C RF
BPF
IC003
HEAD CHANGE DETECT
PB LP CH
PB SP CH
HCHR
REC Y
MIX
REC Y RF
REC AFM
REC ATF
PB Y RF
PB RF
RP-74 BOARD
(See page 107)
IC001
IC002
REC Y
PB Y
PB LP CH
PB SP CH
REC PCM
PB PCM
REC/PB AMP
VIDEO HEAD
SP 1CH
SP 2CH
LP 1CH
LP 2CH
FF ON
FLYING ERASE OSC
FLYING ERASE
CM-15 BOARD(See page 139)
(SERVO)
IC401
SYSTEM/SERVO CONTROL
TOP/END LED
TOP SENSOR
END SENSOR
REEL LED
S REEL FG
T REEL FG
IC303
IC302
CLOG SP/LP DETECT
CLOG
PB SP/LP
PB SP CH
M OUT 0
M OUT 1
M IN 0
M IN 3
IC301
REC ATF
ATF SERVO
ATF ERROR
PB RF
SEL1, SEL2
IC402
REC/PB CONTROL
RP, PB MODE
H CH G
AUTO
HCHR
RP SWP
FE ON
FE ON
AF REC
SP CH SHORT
LP CH SHRT
RF CONT
RF CONT
SI
SO
SCK
SI, SO, SCK
FL+CC SW
UN LD
LD
FL UN LD
FL LD
DRAM D/A
CAP ERH
CAP FG
DRAM FG
PG
UC-4 BOARD
(See page 139)
Q302 TAPE TOP SENSOR
D302
Q301 TAPE END SENSOR
IC501
REEL FG AMP
S REEL FG SENSOR
D301
T REEL FG SENSOR
D303
MATRIX
MODE SWITCH
S301
CASSET DOWN SWITCH
S901
THICKNESS SWITCH
S303
REC PROOF TAPE SELECT
S302
IC403
LOAD/FL MOTOR DRIVE
M903 LOADING MOTOR
M901 FL LOADING MOTOR
IC405 (1/2)
INTEGATOR
IC502
PWM POWER DRIVE
IC405 (1/2)
DRUM MOTOR DRIVE
DRUM PG,FG
IC406
CAPSTAN MOTOR DRIVE
M902
CAPSTAN FG
ge 157.160)
INPUT SELECT
L,R
FR-41 BOARD
(1/4)
IC101, VR101
REC LEVEL CONTROL
IC612
PB
IC614
NOISE REDUCTION
L, R
IC611
AUDIO SELECT (REC PCM)
IC610
AUDIO SELECT (PB PCM)
IC608 (1/2)
AUDIO PB SWITCH
IC609 (1/2)
OUTPUT SELECT
L, R
A/D, D/A CONV
IC701
PB PCM
IC703
PCM PROCESS
IC708
PCM RF
PB PCM
REC ATF
REC PCM
PB PCM
RF CONT
RP SW P
MARKER CS
RAM
IC705
DET W
M.M.V
IC704
INDEX PROCESS
IC707
IC605
IC901
IC801
AFM PROCESS
(1.5MHz)
(1.7MHz)
HOLD OUT
IC603
L
R
MONO
IC903
AUDIO SELECT (REC AFM)
L
R
HOLD OUT
L, R
AFM L
AFM R
AUDIO SELECT (EE/PB AFM)
IC902
REC AFM
PB RF
EE/PB MONO
IC615
AUDIO SELECT (AFM OUT)
L, R
IC608 (1/2)
IC609 (1/2)
L, R
LINE OUT L, R
RFU AUDIO
21P OUT L,R
HP L, R
PB AF ST
COMPARATOR
FILTER
PB AF BIL
TIME CONSTANT SELECT SWITCH
PB RF
CONT
FL-24 BOARD (See page 179)
(TIMER/TUNER CONTROL)
IC005
TIMER/TUNER CONTROL
SI
SO
SCK
AD 0
AD 2
AUDIO DUB LED
AD 3
AD 4
ND001
FL DISPLAY
IC001
L,R
LEVEL METER DRIVE
D001, 002
D007, 009
LED
D004,005,010
SW 5V
LED
CONTROL SW BLOCK
FR-41 BOARD (1/4)
(See page 196)
S101-103, S105, 106, S108-111
AUDIO MONITOR
S107
LED
D113-121

## 4-3. VIDEO BLOCK DIAGRAM (1)


VI-65 BOARD (See page 119 .125)
RP-74 BOARD (See page 107)
IC001 DROPOUT DETECTOR
SOFT LIMITER
H18 MODE FEEDBACK
IC100 Y PROCESS
IC002 SP REC/PB AMP
IC001 LP REC/PB AMP
IC302 REC Y VR SELECT SWITCH
IC003 HEAD CHANGE DETECT
IC301 (1/2)
IC200 (1/2)
IC200 (1/2) PRE-EMPHASIS
IC800 CHROMA EMPHASIS
IC801 CHROMA PROCESS
1.7MHz TRAP
AFM TRAP
ATF TRAP
BUFFER
CHROMA TRAP
EQ AMP
EQ CHARACTOR SWITCH
PB CHROMA BPF
DROPOUT DETECT
TIME CONSTANT SWITCH
LIMITER AMP
LIMITER
H18/STD GAIN SWITCH
LIMITER SWITCH
8MHz TUNING AMP
5MHz TUNING AMP
H18 MODE DETECT
DROPOUT PULSE
DOC LEVEL
H18 MODE BUFFER
STD MODE BUFFER
MPHG H18 SWITCH
MPHG H18 LP MODE SW
MPHG H18 LP MODE PEAKING EQ
PEAKING FREQUENCY SWITCH
DEMODE OUT LPF
H18 MODE EQ
STD MODE EQ
PEAKING EQ
PEAKING FREQUENCY SWITCH
MAIN DE-EMPHASIS
STD MODE PB LEVEL
H18 MODE PB LEVEL
SUB-DEEMPHASIS
HPL
MAIN DE-EMPHASIS
PB LEVEL
CLAMP
AGC DET
AGC AMP
CLAMP VD ADD
VIDEO OUT LEVEL
VIDEO OUT LEVEL
SYNC SEP
SYNC AGC
RF AGC
DOC DET
LIMITER
FM DEMOD
STD/H18 SWITCH
STD/H18 TIME CONSTANT SWITCH
DE-EMPHASIS
SUB TRACK
Y/C/AFM/ATF MIX AMP
C/AFM/ATF MIX
GAIN SWITCH
REC RF LIM AMP
REC RF EQ AMP
AFM EQ
CHROMA EQ
FM MOD
Y CARRIER DEVIATION
H18 MODE DEVI
STD MODE CARR
H18 MODE CARR
STD MODE DEVI
HALF H SWITCH
WHITE CLIP
DARK CLIP
MAIN PRE-EMPHASIS
SUB PRE-EMPHASIS
STD/H18 SWITCH
REC C BUFFER
LPF SWITCH
REC C EQ & AFM TRAP
CARRIER INVERT
CARRIER CONV
378FH VCO
AFC ID
AFC
CHROMA CONV
BURST EMPH/DE EMPH
APC DET
ACK
SYNC DET
3.58MHz X'TAL OSC
90° SHIFT
FF BURST ID
ACC AMP
DC AMP & CH HOLD
PEAK HOLD
SW
CHROMA AMP
REC CHROMA EQ
PAL/SECAM
CH2 HEAD AMP
CH1 HEAD AMP
CH 2 2ND AMP
CH 1 2ND AMP
6dB ATT
AMP
DUMPING
CH 2 REC AMP
CH 1 REC AMP
V-I CONV
Y VOL
PCM VOL
RAMP
RAMP GENERATOR
C MUTE
PB Y AMP
FE CURRENT OUTPUT
FE OSC
GAIN SWITCH
LEVEL COMP
CLAMP
B. AMP
VIDEO HEAD SP CH 2
VIDEO HEAD SP CH 1
VIDEO HEAD LP CH 1
VIDEO HEAD LP CH 2
FLYING ERASE HEAD
SP CH SHORT
LP CH SHORT
AUDIO PC-39 (CN701)
SERVO CM-15 (CN401)
DIGITAL (DS-35)
PB Y
PB C
PB CHROMA
REC CHROMA
REC Y
REC C
VI SWP (CN001 ⑪)
JOG VD (CN001 ⑬)
IC100 ㊲ REC
IC100 ㊲ PB
IC100 ㊵ PB
IC100 ⑥ PB
IC100 ⑤ REC
IC100 ⑤ PB
IC100 ② REC/PB
IC100 ⑫ PB
IC200 ⑭ REC
IC801 ⑱ REC/PB
IC801 ㉜ REC/PB
IC801 ㊵ REC
IC801 ㊺ REC
IC801 ㊺ PB
IC801 ⑥ REC/PB
IC801 8 PB
IC801 ⑭ REC
CN003 ⑦ PB
Q007 Ⓒ REC
X800 4.43MHz
CV800 FSC

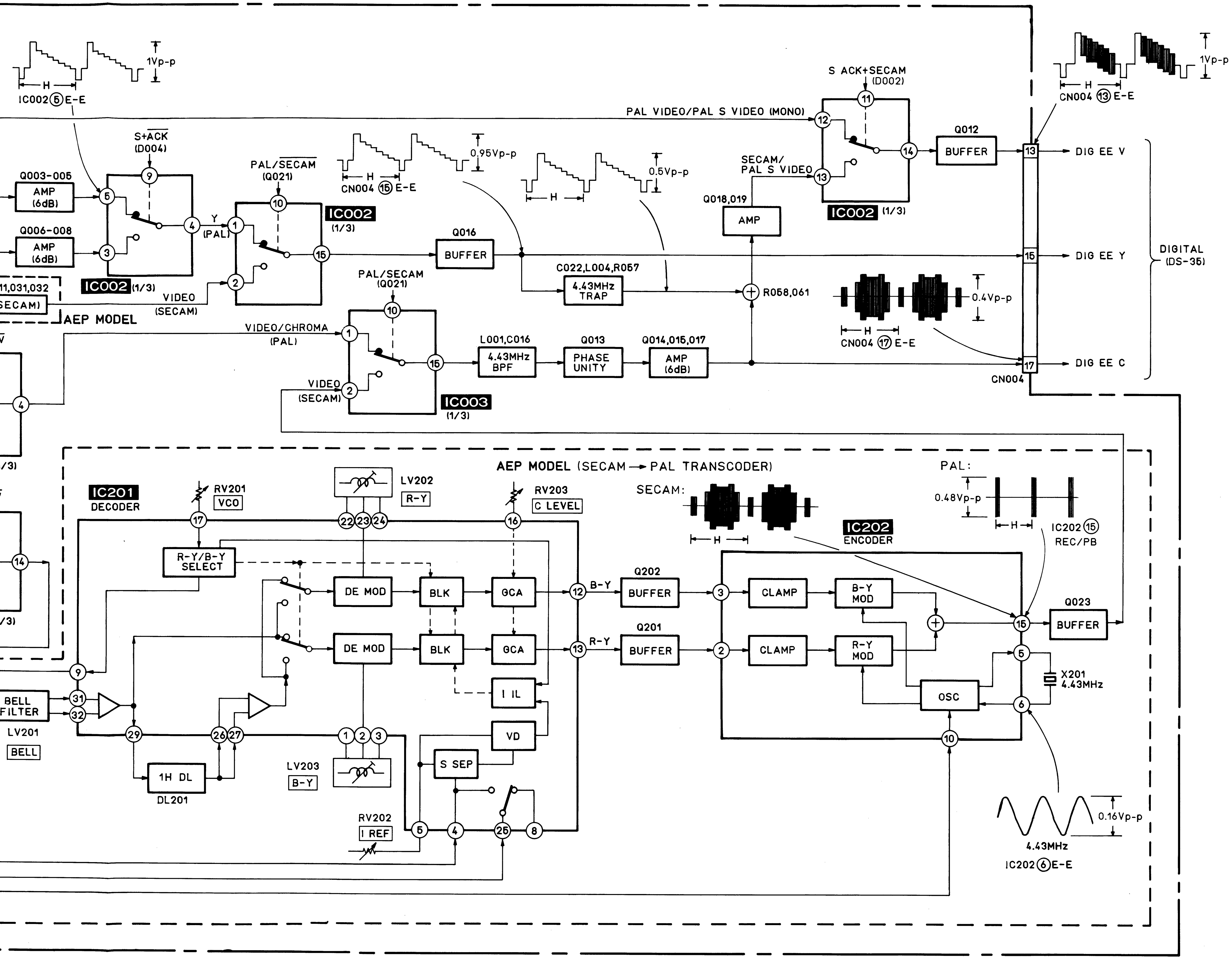

IC101
REC/PB SWITCH
REC
PB
PB 5V
Q118
BUFFER
4.6MHz TRAP
Q140
Q509 (E) REC
0.5Vp-p
FL101
Y LPF
PBY
D101
D100
PB
PAL/SECAM
HPF
Q519
Q520
Q521
BUFFER
STD/HI8 GAIN SWITCH
EDIT Q525
ME/MP Q522
LP/SP Q523
Q524
Q526
LIMITTER AMP
Q528
Q527
Q509
NOISE CANSEL APERTURE CONPENSATION
APERTURE CONPENSATION CHARACTOR SWITCH
SP/LP Q513
Q510
Q511
EDIT Q512
Q514,515
AMP
Q504,508
2.5MHz EQ AMP
Q901,902
4MHz EQ AMP
Q506
Q507
SHRPNESS VOL
Q529
Q530
Q531
INVERTER AMP
LP/SP Q532
Q533
BUFFER
IC500
LIMITER AMP
D503
LIMIT
NOISE CANSEL CHARACTOR SWITCH
Q534
Q535
Q536
ME/MP Q537
EDIT Q537
PB Y
5Vp-p
2.6Vp-p
IC100 (5) REC
IC100 (5) PB
Q126,127
INVERT
Q200,201
STD/HI8 TIME CONSTANT SWITCH
Q124,125
INVERT
Q130
213
DEVIATION
WHITE CLIP
DARK CLIP
MAIN PRE-EMPHASIS
SUB PRE-EMPHASIS
KNEE & WHITE CLIP
CLAMP
REC Y
REG 4.2V
RV204
RV205
HI8 MODE CARR
STD MODE DEVI
STD/HI8 SWITCH
Q205
SWITCH
MPHG·E·LP
Q203
Q204
SWITCH
IC200 (1/2)
PRE-EMPHASIS
Q202
REC/PB SWITCH
PB C
FL801
PB CHROMA BPF
4.32MHz
IC801 (32) REC/PB
IC802
AFC PLUSE GENERATOR
V SEP
SW Px1/2fH PULSE GENERATOR
V1 SWP (CN001 (11))
C SYNC (IC100 (2))
PB 5V
DUB AREA (CN001 (17))
HALF H BUFFER
SYNTHESIS GATE
1/378
378fH
1/8
DELAY PULSE GENERATOR
INVERT
SYNTHSIS GATE
AFC AFC ID
AFC
JOG (CN001 (12))
JOG VD (IC100 (6))(CN001 (13))
AGC P (IC100 (5))
BURST P (IC400 (53))
7324kHz
IC801 (25) REC
Q804
AFC ID
ACK
LPF
CV800
FSC
3.58MHz X'TAL OSC
X800 4.43MHz
90° SHIFT
FF BURST ID
PB 5V
0.34Vp-p
IC801 8 PB
3.58MHz
0.6Vp-p
IC801 (14) REC/PB
IC801 (21) REC/PB
0.38Vp-p
IC801 (22) PB
FL700
BPF
FL701
BPF
PHG·E·LP Q539
5.5MHz TRAP
Q501
AMP
Q500
HI8
STD
REC Y
Q502,503
STD EQ AMP
PAL/SECAM
0.6Vp-p
IC400 (42) PB
PB CHROMA
Q801
PB CHROMA BUFFER
PB 5V
BURST PULSE IC802 (45)
IC400
COMB FILTER
CORR
NON-CORR
DL400(1/2)
1H DELAY
LV400
COMB PHASE
RV400
COMB LEVEL
NON-CORR
CORR
RV401
COMB AGC
AGC DET
AM DET
DL400(2/2)
1H DELAY
AGC
AM MOD
NORMAL
DROP OUT
H SYNC INSERT
CLUMP
CLUMP
YD
Y
X400 10.7MHz
HD INSERT (CN001 (18))
EQ
LPF
CORRELAION DET
COLOR
B/W
REC ON
PB ON
LIMITER
DROP OUT PULSE (Q610)
PB Y
JOG (CN001 (12))
REC/PB
REC/PB Y
0.7Vp-p
IC400 (44) PB
0.7Vp-p
IC400 (2) PB
Q802
BUFFER
Q803
CHROMA MUTE SWITCH
Q706
CHROMA MUTE
BURST P (IC802 (45))
C MUTE
D701(1/2)
PB 5V
D701(1/2)
JOG
D700
PAL V
Q700
AFC CORR SWITCH
3MHz TRAP
RV700
GCA
RV701
FH VCO
Vcc
SW COMP
6dB
MAIN SW
REC
IC700
JOG CHROMA PROCESS
Q701,702
AMP
743KHz TRAP
Q704,705
3.58MHz TRAP
Q817,818
JOG SWITCH
JOG (CN001 (12))
SP/LP (CN001 (1))
CN001
IC100 (2)
IC003 (20)
Q613 (E)
IC100 (23), IC302 (10), IC801 (6), IC802 (2)
IC001 (1), IC802 (13), IC700 (2)
IC802 (47)(48)
IC700 (17)
IC400 (8), IC802 (11)
IC400 (3)
C SYNC
HCHR
PB SP CH
V1 SWP
JOG
JOG VD
PAL V
DUB AREA
HD INSERT
SHARPNESS
AUDIO SERVO (PC-39) (CM-15)
SERVO (CM-15)
AUDIO (PC-39)
DIGITAL (DS-35)
0.5Vp-p
IC400 (24) REC/PB
0.6Vp-p
IC400 (22) PB
IC400 (8) REC
IC400 (8) PB
5.2Vp-p
CN001 (11) REC
Q406,407,416
Y COMB CHARACTOR SWITCH
LP/SP
EDIT
PHG·E·LP
Q405
EDIT SWITCH
EDIT
Q404
DUB AREA SWITCH
DUB AREA (CN001 (17))
CN002 (16) PB
CN002
YD
REC Y
PB Y
CHROMA MUTE
PAL/SECAM
IC700 (8)
D100,Q500,Q812
VIDEO (YC-64)
DIGITAL (DS-35)
AUDIO (PC-39)
VIDEO (YC-64)
CN001
Q518
EDIT
Q316,317
HI/NOR
Q314,315
Q313
ME/MP
L
E
MP/ME
ME·E
Q303
D301
Q301
D300
Q302
MPHG·E
MPHG·E
Q225
MPHG MP
D005
Q805
SP/LP
LP/SP
Q136
PHG E LP
PHG E LP
Q220
DIGITAL (DS-35)
SERVO (CM-15)
IC900
+5V REG
+5V REG
PB 5V
PB
Q318
PB SWITCH
Q019
Q020
CN002
UN SW5.6V
SW 5V
CN001
VIDEO PB
DIGITAL (DS-35)
CN002
HD
SERVO (CM-15)
PB C
VIDEO (YC-64)
0.5Vp-p
CN002 (21) PB

## 4-4. VIDEO BLOCK DIAGRAM (2)

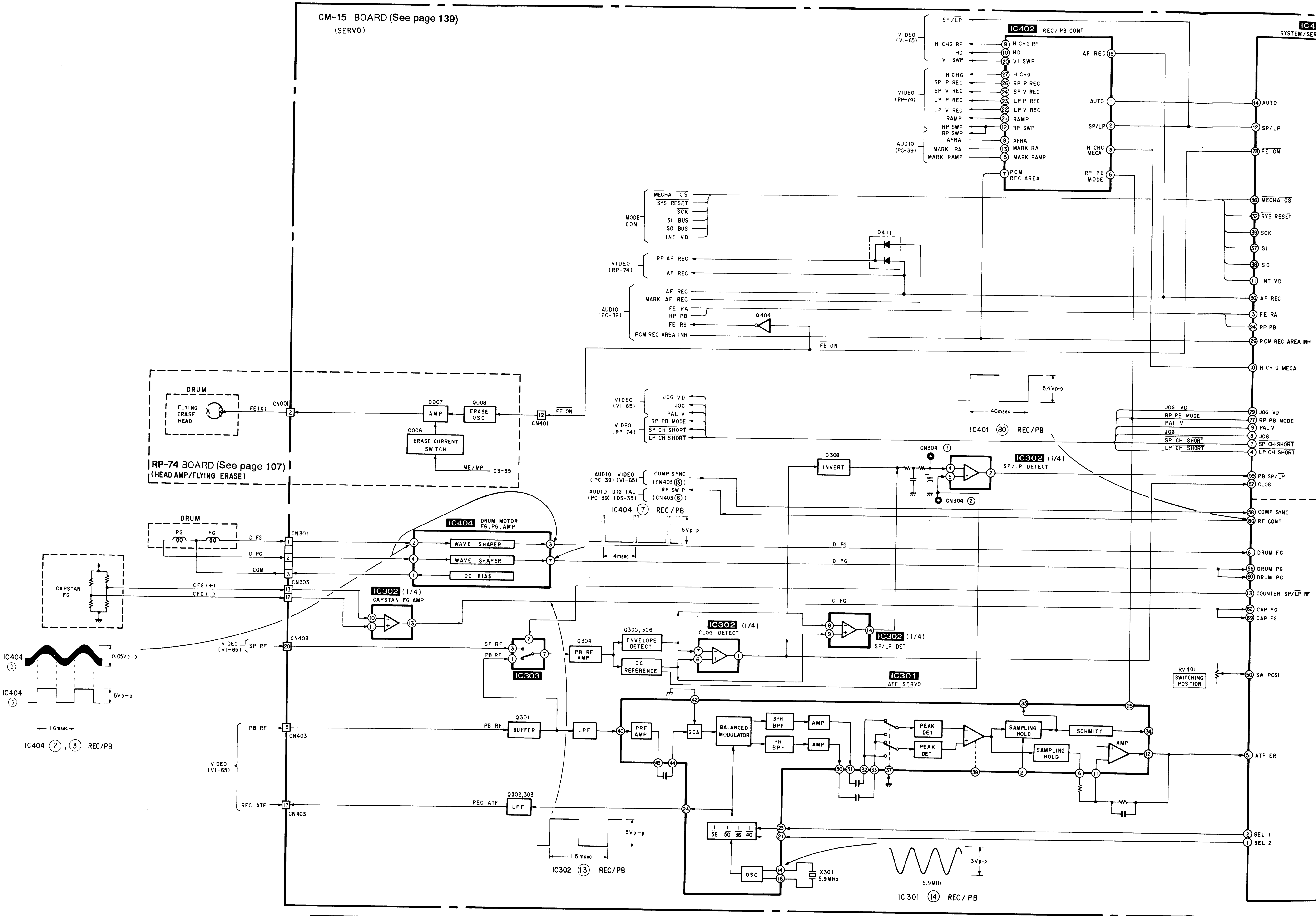

YC-64 BOARD (See page 131)
RJ-5 BOARD (See page 189)
FJ-2 BOARD (See page 195)
FR-41 BOARD (See page 196)
DIGITAL (DS-35)
S1
S2
CNJ501 (1/2)
VIDEO
LINE IN 1
CNJ505
S VIDEO
J101 (1/2)
VIDEO
LINE IN 2
J102
S VIDEO
W502
W108
W007
W103
CN104
TUNER (TU-100)
TU VIDEO
LINE1 VIDEO
LINE1 Y
LINE1 C
LINE2 VIDEO
LINE2 Y
LINE2 C
TIMER/TUNER CONTROL (FL-24)
INSEL 2
INSEL 1
CN004
CN001
CN002
CN003
Q030
Q024
Q026
Q025
Q027
Q029
Q028
BUFFER
VIDEO (TUNER)
VIDEO
Y
CHROMA
S/V̄
IC004 (1/2)
IC001
IC004 ⑫ E-E
1Vp-p
H
Q001
Q002
INSEL 2
INSEL 1
VIDEO (VIDEO IN)
Y (S VIDEO IN)
VIDEO (SECAM)
FL001
4.43MHz TRAP
FL002
DELAY LINE
Q003-005
Q006-008
AMP (6dB)
Q009-011,031,032
LPF(SECAM)
AEP MODEL
S+ACK (D004)
IC002 (1/3)
IC002 ⑤ E-E
VIDEO (SECAM)
IC003 (1/3)
CHROMA (S VIDEO IN)
IC201
DECODER
R-Y/B SELE
D004
S+ACK
Q022
ACK
S.ACK
S.ACK+SECAM
D002
Q020
SECAM
PAL/SECAM
Q021
S/V̄
PAL
EE ACK
DIGITAL (DS-35)
PB Y
PB C
DIG PB C
DIG PB V
DIG PB Y
Q301
Q302
AMP
Q303,304
C
VIDEO
Y
R225
Q203
BELL SWITCH
BELL FILTER
LV201
BELL
1H DL
DL201

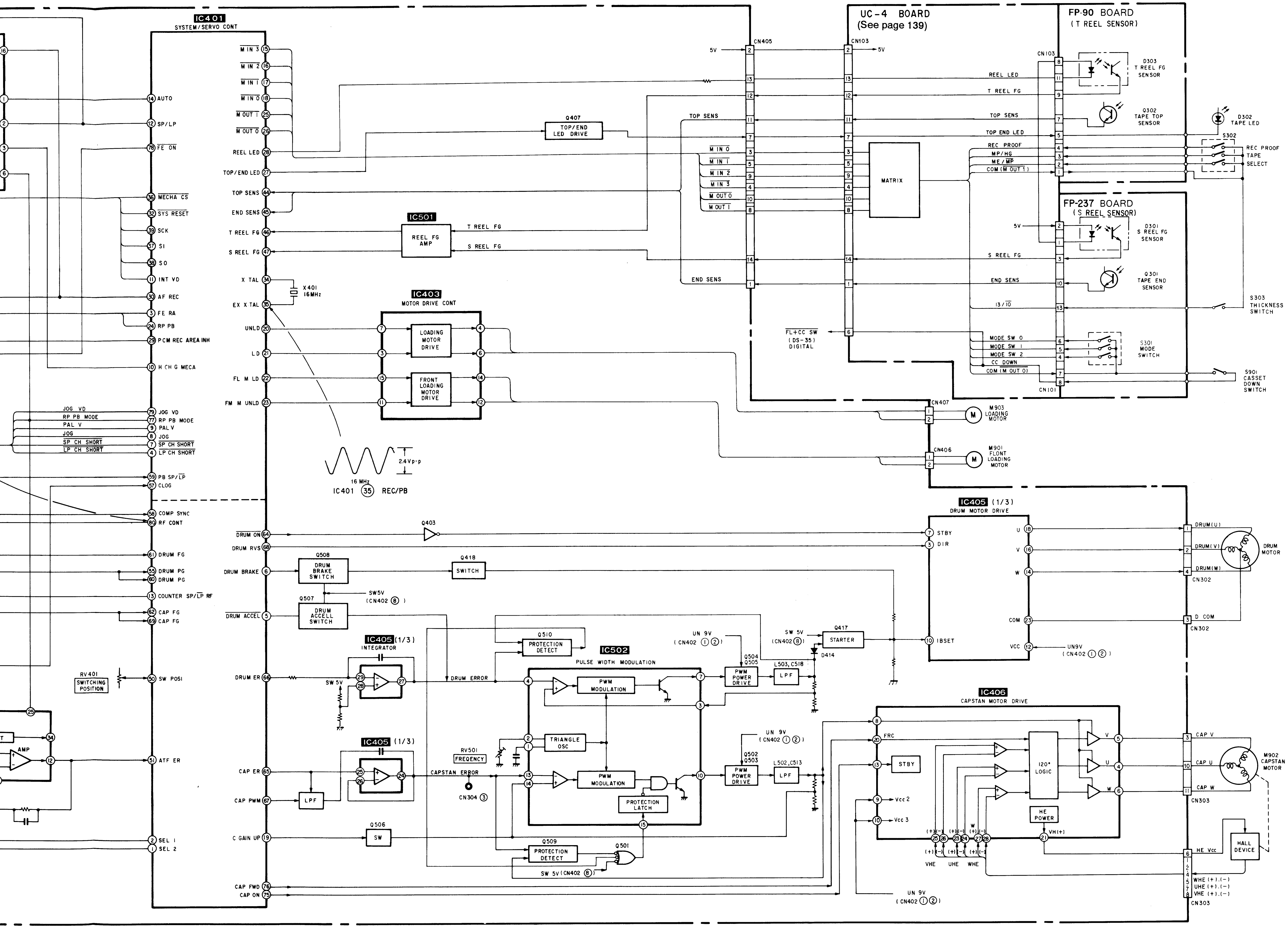
IC001

| INSEL1 | INSEL2 | ON SWITCH |
|---|---|---|
| L | L | 0(TU) |
| H | L | 1(L1) |
| 0 | H | 2(L2) |
| H | H | 3 |


1Vp-p
H
IC002 ⑤ E-E
PAL VIDEO/PAL S VIDEO (MONO)
S ACK+SECAM
(D002)
S+ACK
(D004)
Q003-005
AMP
(6dB)
Q006-008
AMP
(6dB)
PAL/SECAM
(Q021)
0.95Vp-p
CN004 ⑮ E-E
0.5Vp-p
SECAM/
PAL S VIDEO
Q018,019
AMP
Q012
BUFFER
IC002
(1/3)
Y
(PAL)
Q016
BUFFER
VIDEO
(SECAM)
11,031,032
SECAM)
AEP MODEL
C022,L004,R057
4.43MHz
TRAP
R058,061
0.4Vp-p
CN004 ⑰ E-E
CN004 ⑬ E-E
DIG EE V
DIG EE Y
DIG EE C
DIGITAL
(DS-35)
CN004
VIDEO/CHROMA
(PAL)
L001,C016
4.43MHz
BPF
Q013
PHASE
UNITY
Q014,015,017
AMP
(6dB)
IC003
(1/3)
AEP MODEL (SECAM → PAL TRANSCODER)
IC201
DECODER
RV201
VCO
LV202
R-Y
RV203
C LEVEL
SECAM:
PAL:
0.48Vp-p
IC202 ⑮
REC/PB
IC202
ENCODER
R-Y/B-Y
SELECT
DE MOD
BLK
GCA
B-Y
R-Y
Q202
BUFFER
Q201
BUFFER
CLAMP
B-Y
MOD
R-Y
MOD
Q023
BUFFER
X201
4.43MHz
OSC
I IL
VD
S SEP
BELL
FILTER
LV201
BELL
1H DL
DL201
LV203
B-Y
RV202
I REF
0.16Vp-p
4.43MHz
IC202 ⑥ E-E

## 4-5. SYSTEM CONTROL, SERVO BLOCK DIAGRAM


CM-15 BOARD (See page 139)
(SERVO)
IC402 REC/PB CONT
IC4
SYSTEM/SER
VIDEO (VI-65)
H CHG RF
HD
VI SWP
VIDEO (RP-74)
H CHG
SP P REC
SP V REC
LP P REC
LP V REC
RAMP
RP SWP
AUDIO (PC-39)
AFRA
MARK RA
MARK RAMP
PCM REC AREA
AF REC
AUTO
SP/LP
H CHG MECA
RP PB MODE
MODE CON
MECHA CS
SYS RESET
SCK
SI BUS
SO BUS
INT VD
D411
RP AF REC
AF REC
MARK AF REC
FE RA
RP PB
FE RS
PCM REC AREA INH
Q404
FE ON
SCK
SI
SO
INT VD
PCM REC AREA INH
H CHG MECA
DRUM
FLYING ERASE HEAD
FE(X)
CN001
Q007
AMP
Q008
ERASE OSC
Q006
ERASE CURRENT SWITCH
ME/MP
DS-35
CN401
RP-74 BOARD (See page 107)
(HEAD AMP/FLYING ERASE)
5.4Vp-p
40msec
IC401 ⑧⓪ REC/PB
JOG VD
JOG
PAL V
SP CH SHORT
LP CH SHORT
COMP SYNC
RF CONT
PB SP/LP
CLOG
Q308
INVERT
CN304 ①
CN304 ②
IC302 (1/4)
SP/LP DETECT
AUDIO VIDEO (PC-39) (VI-65)
COMP SYNC (CN403 ⑬)
AUDIO DIGITAL (PC-39) (DS-35)
RF SW P (CN403 ⑥)
IC404 ⑦ REC/PB
5Vp-p
4msec
PG
FG
D FG
D PG
COM
CN301
IC404 DRUM MOTOR FG,PG,AMP
WAVE SHAPER
DC BIAS
DRUM FG
DRUM PG
COUNTER SP/LP RF
CAPSTAN FG
CFG(+)
CFG(-)
CN303
IC302 (1/4)
CAPSTAN FG AMP
C FG
CAP FG
IC404 ②
0.05Vp-p
IC404 ③
5Vp-p
1.6msec
IC404 ②, ③ REC/PB
CN403
SP RF
PB RF
IC303
Q304
PB RF AMP
Q305,306
ENVELOPE DETECT
DC REFERENCE
IC302 (1/4)
CLOG DETECT
IC302 (1/4)
SP/LP DET
IC301
ATF SERVO
RV401
SWITCHING POSITION
SW POSI
Q301
BUFFER
LPF
PRE AMP
GCA
BALANCED MODULATOR
3fH BPF
fH BPF
AMP
PEAK DET
SAMPLING HOLD
SCHMITT
ATF ER
VIDEO (VI-65)
REC ATF
Q302,303
58 50 36 40
OSC
X301 5.9MHz
SEL 1
SEL 2
1.5msec
IC302 ⑬ REC/PB
3Vp-p
5.9MHz
IC301 ⑭ REC/PB


IC401
SYSTEM/SERVO CONT
M IN 3
M IN 2
M IN 1
M IN 0
M OUT 1
M OUT 0
REEL LED
TOP/END LED
TOP SENS
END SENS
T REEL FG
S REEL FG
X TAL
EX X TAL
UNLD
LD
FL M LD
FM M UNLD
AUTO
SP/LP
FE ON
MECHA CS
SYS RESET
SCK
SI
SO
INT VD
AF REC
FE RA
RP PB
PCM REC AREA INH
H CH G MECA
JOG VD
RP PB MODE
PAL V
JOG
SP CH SHORT
LP CH SHORT
PB SP/LP
CLOG
COMP SYNC
RF CONT
DRUM FG
DRUM PG
DRUM PG
COUNTER SP/LP RF
CAP FG
CAP FG
SW POSI
ATF ER
SEL 1
SEL 2
AMP
DRUM ON
DRUM RVS
DRUM BRAKE
DRUM ACCEL
DRUM ER
CAP ER
CAP PWM
C GAIN UP
CAP FWD
CAP ON
X401
16MHz
Q407
TOP/END
LED DRIVE
IC501
REEL FG
AMP
T REEL FG
S REEL FG
IC403
MOTOR DRIVE CONT
LOADING
MOTOR
DRIVE
FRONT
LOADING
MOTOR
DRIVE
2.4Vp-p
16 MHz
IC401 ㉟ REC/PB
RV401
SWITCHING
POSITION
Q403
Q508
DRUM
BRAKE
SWITCH
Q418
SWITCH
SW5V
(CN402 ⑧)
Q507
DRUM
ACCELL
SWITCH
IC405 (1/3)
INTEGRATOR
SW 5V
DRUM ERROR
Q510
PROTECTION
DETECT
IC502
PULSE WIDTH MODULATION
PWM
MODULATION
TRIANGLE
OSC
PWM
MODULATION
PROTECTION
LATCH
UN 9V
(CN402 ① ②)
Q504
Q505
PWM
POWER
DRIVE
L503, C518
LPF
SW 5V
(CN402 ⑧)
Q417
STARTER
D414
IC405 (1/3)
LPF
RV501
FREQENCY
CAPSTAN ERROR
CN304 ③
Q506
SW
Q509
PROTECTION
DETECT
Q501
SW 5V (CN402 ⑧)
UN 9V
(CN402 ① ②)
Q502
Q503
PWM
POWER
DRIVE
L502, C513
LPF
5V
CN405
TOP SENS
END SENS
UC-4 BOARD
(See page 139)
CN103
5V
MATRIX
FL+CC SW
(DS-35)
DIGITAL
REEL LED
T REEL FG
TOP SENS
TOP END LED
REC PROOF
MP/HG
ME/MP
COM (M OUT 1)
S REEL FG
END SENS
13/10
MODE SW 0
MODE SW 1
MODE SW 2
CC DOWN
COM (M OUT 0)
CN101
FP-90 BOARD
(T REEL SENSOR)
D303
T REEL FG
SENSOR
Q302
TAPE TOP
SENSOR
D302
TAPE LED
S302
REC PROOF
TAPE
SELECT
FP-237 BOARD
(S REEL SENSOR)
5V
D301
S REEL FG
SENSOR
Q301
TAPE END
SENSOR
S303
THICKNESS
SWITCH
S301
MODE
SWITCH
S901
CASSET
DOWN
SWITCH
CN407
M903
LOADING
MOTOR
CN406
M901
FLONT
LOADING
MOTOR
IC405 (1/3)
DRUM MOTOR DRIVE
STBY
DIR
IBSET
U
V
W
COM
VCC
UN9V
(CN402 ① ②)
DRUM(U)
DRUM(V)
DRUM(W)
CN302
D COM
CN302
DRUM
MOTOR
IC406
CAPSTAN MOTOR DRIVE
FRC
STBY
Vcc 2
Vcc 3
120°
LOGIC
HE
POWER
VH(+)
VHE
UHE
WHE
UN 9V
(CN402 ① ②)
CAP V
CAP U
CAP W
CN303
M902
CAPSTAN
MOTOR
HALL
DEVICE
HE Vcc
WHE (+),(−)
UHE (+),(−)
VHE (+),(−)
CN303

## 4-6. SYSTEM CONTROL – VIDEO, AUDIO BLOCK INTERFACE (CM-15 BOARD IC401)

| SIGNAL | I/O | Pin No. | EJECTED | THREAD-ING | UN THREAD-ING | STOP | FF | REW | CUE | REVIEW | PB | PB・PAUSE | REC | REC・PAUSE | X2 | SLOW | AF REC | AF REC P. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SEL 2 | O | IC401 ① Pin | H | H | H | H | H | H | *3 | *3 | *2 | H | *1 | L | *17 | *18 | *19 | H |
| SEL 1 | O | IC401 ② Pin | H | H | H | H | H | H | *3 | *3 | *2 | H | *1 | H | *17 | *18 | *19 | H |
| $\overline{\text{DRUM ON}}$ | O | IC401 (64) Pin | H | L | L | H | L | L | L | L | L | L | L | L | L | L | L | L |
| INT VD | O | IC401 ⑪ Pin | *4 | *4 | *4 | *4 | *4 | *4 | *4 | *4 | *4 | *4 | *4 | *4 | *4 | *4 | *4 | *4 |
| SW POSI | I | IC401 ㊿ Pin | *5 | *5 | *5 | *5 | *5 | *5 | *5 | *5 | *5 | *5 | *5 | *5 | *5 | *5 | *5 | *5 |
| ATF ERROR | I | IC401 (51) Pin | *6 | *6 | *6 | *6 | *7 | *7 | *7 | *7 | *7 | *7 | *6 | *6 | *7 | *7 | *7 | *7 |
| DRUM PG | I | IC401 (55), (60) Pin | L | *8 | *8 | L | *8 | *8 | *8 | *8 | *8 | *8 | *8 | *8 | *8 | *8 | *8 | *8 |
| DRUM FG | I | IC401 (61) Pin | H | *9 | *9 | H | *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 |
| CAP FG | I | IC401 (62), (63) Pin | H/L | PULSE | PULSE | H/L | *10 | *10 | *10 | *10 | *10 | H/L | *10 | H/L | *10 | H/L | *10 | H/L |
| CAP ERH | O | IC401 (65) Pin | *11 | *11 | *11 | L | *11 | *11 | *11 | *11 | *11 | L | *11 | L | *11 | *11 | *11 | L |
| DRUM ERROR | O | IC401 (66) Pin | L | *12 | *12 | L | *12 | *12 | *12 | *12 | *12 | *12 | *12 | *12 | *12 | *12 | *12 | *12 |
| CAP PWM | O | IC401 (67) Pin | L | *13 | *13 | L | *13 | *13 | *13 | *13 | *13 | L | *13 | L | *13 | *13 | *13 | L |
| DRUM RVS | O | IC401 (68) Pin | "L" | *14 | L | L | L | L | L | L | L | L | L | L | L | L | L | L |
| CAP ON | O | IC401 (75) Pin | L | H | H | L | H | H | H | H | H | L | H | L | H | H/L | H | L |
| CAP FWD | O | IC401 (76) Pin | L | L | H | L | H | L | H | L | H | H | H | L | H | H/L | H | L |
| RF CONT | O | IC401 (80) Pin | *16 | *16 | *16 | "H"or "L" | *16 | *16 | *16 | *16 | *16 | *16 | *16 | *16 | *16 | *16 | *16 | *16 |

*1. Refer to timing chart 1.
*2. Refer to timing chart 2.
*3. Refer to timing chart 3.
*4. 1V period "H" pulse.
*5. DC voltage set with RV102 (Switching position adjustment).
*6. Approx. 2.5Vdc.
*7. ATF error voltage.
*8. 2V period "H". pulse.
*9. 1.4msec period pulse.
*10. Pulses in proportion to frequency of the tape speed.
*11. Pulse output for rising or talling edges of the capstan.
*12. 6msec period PWM signal (tri-state) of "H", "L" and "HI-Z" (2.5Vdc).
*13. 64 μsec period PWM signal.
*14. Momentariy "H" when threading of full top tape.
*16. 2V period duty 50% pulse.

## 4-7. SYSTEM CONTROL – SERVO PERIPHERAL CI

| SIGNAL | I/O | Pin No. | STOP | FF |
|---|---|---|---|---|
| SP P REC | O | CN401 ③ Pin | L | L |
| LP V REC | O | CN401 ④ Pin | L | L |
| LP P REC | O | CN401 ⑤ Pin | L | L |
| SP V REC | O | CN401 ⑥ Pin | L | L |
| $\overline{\text{SP CH SHORT}}$ | O | CN401 ⑧ Pin | *13 | L |
| $\overline{\text{LP CH SHORT}}$ | O | CN401 ⑨ Pin | *13 | H |
| JOG | O | IC401 ⑧ Pin | L | L |
| SP/$\overline{\text{LP}}$ | O | IC401 ⑫ Pin | H/L | H/L |
| SYSCON SO (SI) | O | IC401 ㊳ Pin | *9 | *9 |
| $\overline{\text{SYSCON SCK}}$ (SCK) | I | IC401 ㊴ Pin | *10 | *10 |
| CLOG | I | IC401 (57) Pin | H | *5 |
| COMP SYNC | I | IC401 (58) Pin | *6 | *6 |
| PB SP/$\overline{\text{LP}}$ | I | IC401 (59) Pin | L | *7 |
| RP PB MODE | O | IC401 (77) Pin | L | L |
| $\overline{\text{FF ON}}$ | O | IC401 (78) Pin | H | H |
| JOG VD | O | IC401 (79) Pin | L | L |
| RF CONT*1 | O | IC401 (80) Pin | 1.8Vdc | *11 |

*1. According to recorded mode of playback tape. (SP…"H", LP…"L")
*2. According to SP/LP selector (S602) setting. (SP…"H", LP…"L")
*3. 1V period "H" pulse.
*5. Non-signal "H" normal "L"
*6. Positive compound synchronizing signal.
*7. SP mode recording tape "H"
LP mode recording tape "L"
*9. 1V period "L" pulse train.
*10. 1V p
*11. 2V p
*12. PCM
*13. Acc
(SP.
*14. Acc
*15. Acc
(SP.
*16. "H"

| REC | REC • PAUSE | X2 | SLOW | AF REC | AF REC P. |
|---|---|---|---|---|---|
| *1 | L | *17 | *18 | *19 | H |
| *1 | H | *17 | *18 | *19 | H |
| L | L | L | L | L | L |
| *4 | *4 | *4 | *4 | *4 | *4 |
| *5 | *5 | *5 | *5 | *5 | *5 |
| *6 | *6 | *7 | *7 | *7 | *7 |
| *8 | *8 | *8 | *8 | *8 | *8 |
| *9 | *9 | *9 | *9 | *9 | *9 |
| *10 | H/L | *10 | H/L | *10 | H/L |
| *11 | L | *11 | *11 | *11 | L |
| *12 | *12 | *12 | *12 | *12 | *12 |
| *13 | L | *13 | *13 | *13 | L |
| L | L | L | L | L | L |
| H | L | H | H/L | H | L |
| H | L | H | H/L | H | L |
| *16 | *16 | *16 | *16 | *16 | *16 |

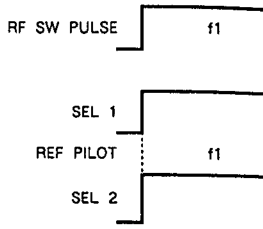
HI-Z" (2.5Vdc).

## 4-7. SYSTEM CONTROL – SERVO PERIPHERAL CIRCUIT INTERFACE (CM-15 BOARD IC401)

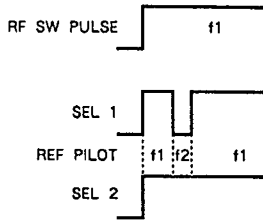
| SIGNAL | I/O | Pin No. | STOP | FF | REW | CUE | REVIEW | PB | PB• PAUSE | REC | REC• PAUSE | X2 | SLOW | AF REC | AF REC PAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SP P REC | O | CN401 ③ Pin | L | L | L | L | L | L | L | *16 | L | L | L | *16 | L |
| LP V REC | O | CN401 ④ Pin | L | L | L | L | L | L | L | *2 | L | L | L | L | L |
| LP P REC | O | CN401 ⑤ Pin | L | L | L | L | L | L | L | *16 | L | L | L | *16 | L |
| SP V REC | O | CN401 ⑥ Pin | L | L | L | L | L | L | L | *2 | L | L | L | L | L |
| $\overline{\text{SP CH SHORT}}$ | O | CN401 ⑧ Pin | *13 | L | H | H | H | *13 | *14 | *15 | *15 | *14 | *14 | *13 | *14 |
| $\overline{\text{LP CH SHORT}}$ | O | CN401 ⑨ Pin | *13 | H | H | H | H | *13 | *14 | *15 | *15 | *14 | *14 | *13 | *14 |
| JOG | O | IC401 ⑧ Pin | L | L | L | H | H | L | H | L | L | H | H | L | H |
| SP/$\overline{\text{LP}}$ | O | IC401 ⑫ Pin | H/L | H/L | H/L | *1 | *1 | *1 | *1 | *2 | *2 | *1 | *1 | *1 | *1 |
| SYSCON SO (SI) | O | IC401 ㊳ Pin | *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 |
| $\overline{\text{SYSCON SCK}}$ (SCK) | I | IC401 ㊴ Pin | *10 | *10 | *10 | *10 | *10 | *10 | *10 | *10 | *10 | *10 | *10 | *10 | *10 |
| CLOG | I | IC401 (57) Pin | H | *5 | *5 | *5 | *5 | *5 | H | H | H | H | H | H | H |
| COMP SYNC | I | IC401 (58) Pin | *6 | *6 | *6 | *6 | *6 | *6 | *6 | *6 | *6 | *6 | *6 | *6 | *6 |
| PB SP/$\overline{\text{LP}}$ | I | IC401 (59) Pin | L | *7 | *7 | *7 | *7 | L | L | L | L | L | L | L | L |
| RP PB MODE | O | IC401 (77) Pin | L | L | L | H | H | H | H | L | L | H | H | H | H |
| $\overline{\text{FF ON}}$ | O | IC401 (78) Pin | H | H | H | H | H | H | H | L | H | H | H | *12 | H |
| JOG VD | O | IC401 (79) Pin | L | L | L | *3 | *3 | L | *3 | L | L | *3 | *3 | *3 | *3 |
| RF CONT*1 | O | IC401 (80) Pin | 1.8Vdc | *11 | *11 | *11 | *11 | *11 | *11 | *11 | *11 | *11 | *11 | *11 | *11 |

*1. According to recorded mode of playback tape.
(SP…"H", LP…"L")
*2. According to SP/LP selector (S602) setting.
(SP…"H", LP…"L")
*3. 1V period "H" pulse.
*5. Non-signal "H" normal "L"
*6. Positive compound synchronizing signal.
*7. SP mode recording tape "H"
LP mode recording tape "L"
*9. 1V period "L" pulse train.
*10. 1V period "L" pulse train.
*11. 2V period duty 50% pulse.
*12. PCM eria "L" when SP after recording, Normally: "H"
*13. According to recorded mode of playback tape.
(SP…"L", LP…"H")
*14. According to HCHG.
*15. According to SP/LP selector (S602) setting.
(SP…"L", LP…"H")
*16. "H" in PCM area according to REC SP/LP.

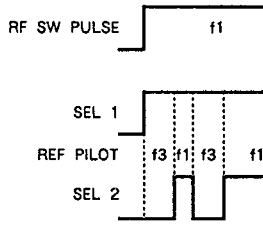
TIMING CHART 1 (REC)



TIMING CHART 2 (PB)



TIMING CHART 3 (CUE/

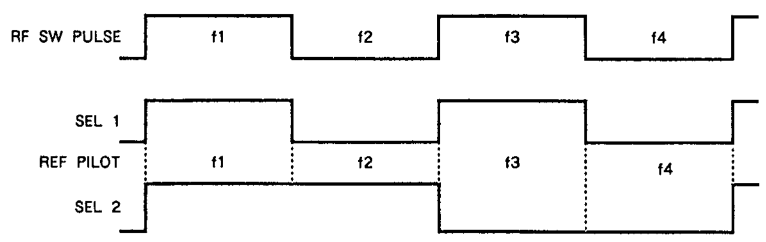


## T INTERFACE (CM-15 BOARD IC401)

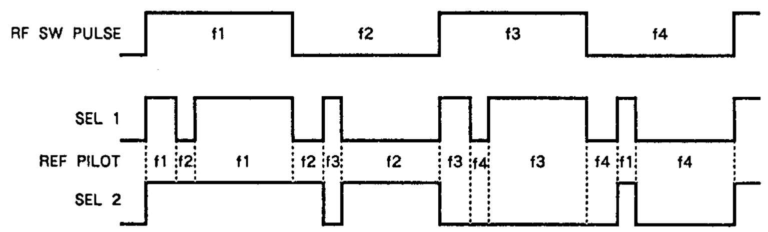
| CUE | REVIEW | PB | PB• PAUSE | REC | REC• PAUSE | X2 | SLOW | AF REC | AF REC PAUSE |
|---|---|---|---|---|---|---|---|---|---|
| L | L | L | L | *16 | L | L | L | *16 | L |
| L | L | L | L | *2 | L | L | L | L | L |
| L | L | L | L | *16 | L | L | L | *16 | L |
| L | L | L | L | *2 | L | L | L | L | L |
| H | H | *13 | *14 | *15 | *15 | *14 | *14 | *13 | *14 |
| H | H | *13 | *14 | *15 | *15 | *14 | *14 | *13 | *14 |
| H | H | L | H | L | L | H | H | L | H |
| *1 | *1 | *1 | *1 | *2 | *2 | *1 | *1 | *1 | *1 |
| *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 | *9 |
| *10 | *10 | *10 | *10 | *10 | *10 | *10 | *10 | *10 | *10 |
| *5 | *5 | *5 | H | H | H | H | H | H | H |
| *6 | *6 | *6 | *6 | *6 | *6 | *6 | *6 | *6 | *6 |
| *7 | *7 | L | L | L | L | L | L | L | L |
| H | H | H | H | L | L | H | H | H | H |
| H | H | H | H | L | H | H | H | *12 | H |
| *3 | *3 | L | *3 | L | L | *3 | *3 | *3 | *3 |
| *11 | *11 | *11 | *11 | *11 | *11 | *11 | *11 | *11 | *11 |

"L" pulse train.
duty 50% pulse.
"L" when SP after recording, Normally: "H"
to recorded mode of playback tape.
LP..."H")
to HCHG.
to SP/LP selector (S602) setting.
LP..."H")
M area according to REC SP/LP.

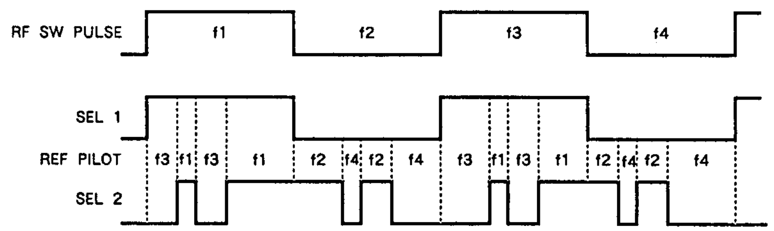
TIMING CHART 1 (REC)


RF SW PULSE
f1
f2
f3
f4
SEL 1
REF PILOT
f1
f2
f3
f4
SEL 2

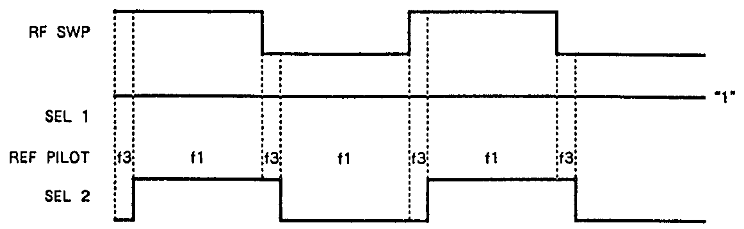
TIMING CHART 2 (PB)


RF SW PULSE
f1
f2
f3
f4
SEL 1
REF PILOT
f1
f2
f1
f2
f3
f2
f3
f4
f3
f4
f1
f4
SEL 2

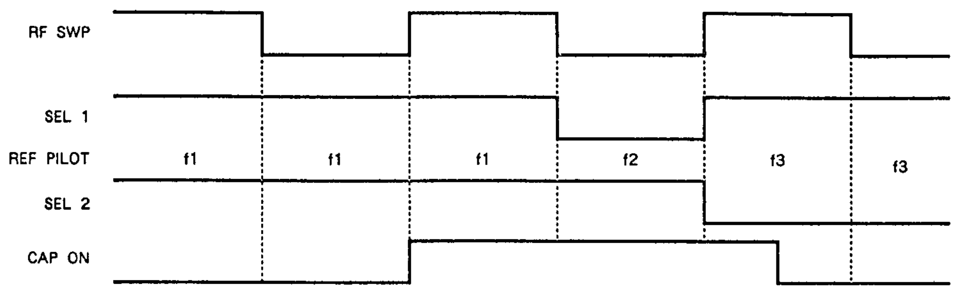
TIMING CHART 3 (CUE/REVIEW)


RF SW PULSE
f1
f2
f3
f4
SEL 1
REF PILOT
f3
f1
f3
f1
f2
f4
f2
f4
f3
f1
f3
f1
f2
f4
f2
f4
SEL 2

TIME CHART (×2)

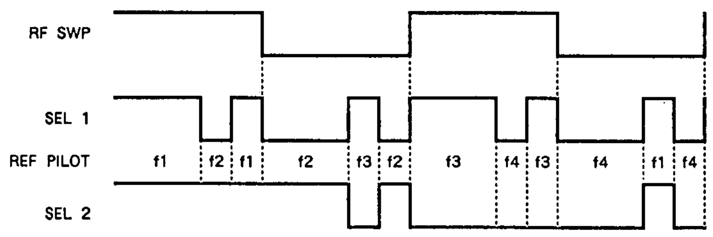

RF SWP
SEL 1
"1"
REF PILOT
f3
f1
f3
f1
f3
f1
f3
SEL 2

TIME CHART (SLOW)


RF SWP
SEL 1
REF PILOT
f1
f1
f1
f2
f3
f3
SEL 2
CAP ON

when f1 still from step.
when from f3 f1⇒f3 f2⇒f4 f3⇒f1

TIME CHART (AF REC)


RF SWP
SEL 1
REF PILOT
f1
f2
f1
f2
f3
f2
f3
f4
f3
f4
f1
f4
SEL 2

## 4-8. SYSTEM CONTROL – SYSTEM CONTROL PERIPHERAL CIRCUIT INTERFACE (CM-15 BOARD IC401)

| SIGNAL | I/O | Pin No. | INPUT OUTPUT LEVEL |
|---|---|---|---|
| $\overline{\text{SYSCON SCK}}$ | I | IC401 ㊴ Pin | 1V period “L” pulse train |
| CLOG | I | IC401 ㊼ Pin | Normal playback: “L” (“H” when PB RF signal is not reproduced due to head clog, etc.) |
| PB SP/$\overline{\text{LP}}$ | I | IC401 (59) Pin | Recording speed mode detection signal in FF, REW, CUE or REVIEW (“H” in SP mode, “L” in LP mode) |
| UNLD | O | IC401 ⑳ Pin | Normally: “L” (“H” in Unthreading, pulse is output in Mechanical mode transition) |
| LD | O | IC401 ㉑ Pin | Normally: “L” (“H” in Threading,“H” pulse is output in Mechanical mode transition) |
| FL UNLD | O | IC401 ㉓ Pin | Normally: “L” (“H” in Front roading) |
| LD | O | IC401 ㉒ Pin | Normally: “L” (“H” in Front unroading) |
| FERA | O | IC401 ③ Pin | Normally: “L” (“H” in After recording mask eria) |
| $\overline{\text{DRUM ACCELL}}$ | O | IC401 ⑤ Pin | Normally: “L” (An instant “L” in slow) |
| DRUM BRAKE | O | IC401 ⑥ Pin | Normally: “L” ( An instant “H” in LP slow) |
| H CHG MECHA | O | IC401 ⑩ Pin | Normally: “L”, when slow, × 2 and STILL is unphase (“H”:SP head side, “L”: LP head side) |
| C GAIN UP | O | IC401 ⑲ Pin | Normally: “L” (“H” in FF/REW) |
| REEL LED | O | IC401 ㉘ Pin | Reel led flicker pulse |
| PCM REC INH | O | IC401 ㉙ Pin | Normally: “H” (“L” in PCM REC) |
| AF REC | O | IC401 ㉚ Pin | Normally: “L” (“H” in After recording) |
| $\overline{\text{LP CH SHORT}}$ | O | IC401 ④ Pin | “L” during SP head playback, “H” during LP head playback. |
| $\overline{\text{SP CH SHORT}}$ | O | IC401 ⑦ Pin | “L” during LP head playback, “H” during SP head playback. |
| PAL V | O | IC401 ⑨ Pin | 20 msec cycle pulse. “H” for 1 msec. |
| COUNTER SP/$\overline{\text{LP}}$ RF | O | IC401 ⑬ Pin | Normally “L”.  “H” when C/R, FF/REW. |
| PCM PB | O | IC401 ㉔ Pin | “H” during PCM playback. |

## 4-9. SYSTEM CONTROL – MECHANISM BLOCK INTERFACE (CM-15 BOARD IC401, CN4

<table>
<tr><th>SIGNAL</th><th>I/O</th><th>Pin No.</th><th>INPUT OUTPUT LEVEL</th></tr>
<tr><td>$\overline{\text{S REEL FG}}$</td><td>I</td><td>CM-15<br>CN405 ⑫ Pin</td><td>Pulse (5.0Vp-p) that is generated by S-reel rotation.<br>It is approx. 1sec period in REC/PB (SP) mode.</td></tr>
<tr><td>MODE SW 2</td><td>I</td><td>UC-4<br>CN001 ④ Pin</td><td rowspan="4">Pins are connected to mode switch for mechanical posit
<table>
<tr><th></th><th>EJECTED</th><th>THREADING UNTHREADING</th><th>STOP</th></tr>
<tr><td>MODE SW 2(④−⑦)</td><td>○</td><td>×</td><td>×</td></tr>
<tr><td>MODE SW 1(⑤−⑦)</td><td>○</td><td>○</td><td>○</td></tr>
<tr><td>MODE SW 0(⑥−⑦)</td><td>×</td><td>×</td><td>○</td></tr>
</table></td></tr>
<tr><td>MODE SW 1</td><td>I</td><td>UC-4<br>CN001 ⑤ Pin</td></tr>
<tr><td>MODE SW 0</td><td>I</td><td>UC-4<br>CN001 ⑥ Pin</td></tr>
<tr><td>$\overline{\text{M OUT 0}}$ (COM)</td><td>O</td><td>UC-4<br>CN001 ⑦ Pin</td></tr>
<tr><td>CC DOWN</td><td>I</td><td>UC-4<br>CN001 ⑧ Pin</td><td rowspan="2">It is connected to cassette compartment down detection switch.<br>When cassette compartment comes down, Pins ⑧ and circuited.<br>When cassette compartment comes up, connection bet and ⑦ open.</td></tr>
<tr><td>$\overline{\text{M OUT 0}}$ (COM)</td><td>O</td><td>UC-4<br>CN001 ⑦ Pin</td></tr>
<tr><td>END SENS</td><td>I</td><td>CM-15<br>CN405 ① Pin</td><td>Normally: “L” (“H” pulse is output in tape end or cassett</td></tr>
<tr><td>13/10</td><td>I</td><td>UC-4<br>CN001 ⑬ Pin</td><td>“L” pulse when a thick tape using.</td></tr>
<tr><td>$\overline{\text{M OUT 1}}$ (COM)</td><td>O</td><td>CM-15<br>CN405 ⑧ Pin</td><td>13/10, MP, COM of REC PROOF SW.<br>Always “L” pulse.</td></tr>
<tr><td>MP HG</td><td>I</td><td>CM-15<br>CN405 ⑫ Pin</td><td>“L” pulse (20msec period) is output when normal MP ta</td></tr>
<tr><td>TOP END LED</td><td>I</td><td>CM-15<br>CN405 ⑦ Pin</td><td>“L” pulse (approx. 1Vp-p) (pulse period is changed from according to operation mode.)</td></tr>
<tr><td>TOP SENS</td><td>O</td><td>CM-15<br>CN405 ⑪ Pin</td><td>Normally: “L” (“H” pulse is output in tape or cassette un</td></tr>
<tr><td>ME/$\overline{\text{MP}}$</td><td>I</td><td>UC-4<br>CN002 ② Pin</td><td>“H” in MP tape (“L” pulse (20msec period) in cassette u</td></tr>
<tr><td>REC PROOF</td><td>I</td><td>UC-4<br>CN002 ④ Pin</td><td>“H” when recording possible cassette is loaded<br>“L” pulse (20msec period) is output, when recording inh is loaded.</td></tr>
<tr><td>$\overline{\text{T REEL FG}}$</td><td>I</td><td>CM-15<br>CN405 ⑫ Pin</td><td>Pulse (5.0Vp-p) that is generated by T-reel rotation, in mode, it is approx. 1sec period.</td></tr>
</table>

## BLOCK INTERFACE (CM-15 BOARD IC401, CN405, UC-4 BOARD)

<table>
<tr><th>INPUT OUTPUT LEVEL</th></tr>
<tr><td>Pulse (5.0Vp-p) that is generated by S-reel rotation.<br>It is approx. 1sec period in REC/PB (SP) mode.</td></tr>
<tr><td>Pins are connected to mode switch for mechanical position detection.
<table>
<tr><th></th><th>EJECTED</th><th>THREADING UNTHREADING</th><th>STOP</th><th>REC/PB/FF/ REW/CUE/ REVIEW/PAUSE</th></tr>
<tr><td>MODE SW 2(④−⑦)</td><td>○</td><td>×</td><td>×</td><td>○</td></tr>
<tr><td>MODE SW 1(⑤−⑦)</td><td>○</td><td>○</td><td>○</td><td>×</td></tr>
<tr><td>MODE SW 0(⑥−⑦)</td><td>×</td><td>×</td><td>○</td><td>○</td></tr>
</table>
×···Open<br>○···Short</td></tr>
<tr><td>It is connected to cassette compartment down detection (CC DOWN) switch.<br>When cassette compartment comes down, Pins ⑧ and ⑦ are short-circuited.<br>When cassette compartment comes up, connection between Pins ⑧ and ⑦ open.</td></tr>
<tr><td>Normally: “L” (“H” pulse is output in tape end or cassette unloaded)</td></tr>
<tr><td>“L” pulse when a thick tape using.</td></tr>
<tr><td>13/10, MP, COM of REC PROOF SW.<br>Always “L” pulse.</td></tr>
<tr><td>“L” pulse (20msec period) is output when normal MP tape is used.</td></tr>
<tr><td>“L” pulse (approx. 1Vp-p) (pulse period is changed from 12 to 170msec according to operation mode.)</td></tr>
<tr><td>Normally: “L” (“H” pulse is output in tape or cassette unloaded)</td></tr>
<tr><td>“H” in MP tape (“L” pulse (20msec period) in cassette unloaded)</td></tr>
<tr><td>“H” when recording possible cassette is loaded<br>“L” pulse (20msec period) is output, when recording inhibiting cassette is loaded.</td></tr>
<tr><td>Pulse (5.0Vp-p) that is generated by T-reel rotation, in REC/PB (SP) mode, it is approx. 1sec period.</td></tr>
</table>

## 4-10. MODE CONTROL PERIPHERAL CIRCUIT INTERFACE (IC001 ON DS-35 BOARD)

| SIGNAL | I/O | Pin No. | INPUT OUTPUT LEVEL |
|---|---|---|---|
| AFM MUTE 1 | O | ① Pin | “L” when AUDIO MONITOR switch is PCM. |
| AFM MUTE 2 | O | ② Pin | “L” when AUDIO MONITOR switch is PCM. |
| OUTPUT SEL 1 | O | ③ Pin | “H” when AUDIO MONITOR switch is PCM. However, MONO STEREO. |
| OUTPUT SEL 2 | O | ④ Pin | “H” when AUDIO MONITOR switch is PCM. However, MONO STEREO. |
| OUTPUT SEL 3 | O | ⑤ Pin | “H” when AUDIO MONITOR switch is PCM. However, MONO STEREO. |
| OUTPUT SEL 4 | O | ⑥ Pin | “H” when AUDIO MONITOR switch is PCM. However, MONO STEREO. |
| PCM ACT | I | ⑩ Pin | “H” during PCM recorded tape playback. |
| $\overline{\text{AF ST}}$ | O | ⑪ Pin | “L” during AFM STEREO recorded tape playback. |
| TIMER TITLE | O | ⑮ Pin | “H” during TIMER TITLE recording. |
| $\overline{\text{AF BIL DET}}$ | I | ㉓ Pin | “L” during AFM BILINGUAL recorded tape playback. |
| AF ST DET | I | ㉔ Pin | “H” during AFM STEREO recorded tape playback. |
| $\overline{\text{S1}}$ | I | ㉛ Pin | “L” when S terminal is connected on the rear side. |
| $\overline{\text{S2}}$ | I | ㉜ Pin | “L” when S terminal is connected on the front side. |
| HI BAND | I | ㉞ Pin | “H” during HI BAND recorded tape playback. |
| $\overline{\text{MAKER CS}}$ | O | ㊲ Pin | 1V cycle “L” pulse (only when the power is on). |
| $\overline{\text{PCM RAM CS}}$ | O | ㊳ Pin | 1V cycle “L” pulse (only when the power is on). |
| $\overline{\text{TT CS}}$ | O | ㊴ Pin | 1V cycle “L” pulse. |
| $\overline{\text{MECHA CS}}$ | O | ㊵ Pin | 1V cycle “L” pulse (only when the power is on). |
| LINCS P COST | O | ㊼ Pin | “H” when the power is on and LANC M/S=S. |
| PAL | O | ㊽ Pin | “H” when COLOUR SYSTEM SELECT SW is PAL. |
| V MUTE | O | ㊾ Pin | “H” during VIDEO MUTE. |
| $\overline{\text{SYS RESET}}$ | O | (52) Pin | “H” when the power is on. |
| MPHG/$\overline{\text{MP}}$ | O | (53) Pin | “H” when MPHG cassette is in. |
| ME/$\overline{\text{MP}}$ | O | (54) Pin | “H” when ME cassette is in. |
| HI/$\overline{\text{NOR}}$ | O | (56) Pin | “H” during HI BAND recorded tape playback. |
| OUT PB | O | (59) Pin | “H” during playback. |
| VIDEO PB | O | (60) Pin | “H” during playback. |
| AUDIO PB | O | (61) Pin | “H” during playback. (However, “L” when AUDIO INCERT.) |
| AF $\overline{\text{BIL}}$ | O | (62) Pin | “L” during AFM BILINGUAL recorded tape playback. |
| $\overline{\text{AUDIO ATT}}$ | O | (63) Pin | “L” during INDEX MARK on playback. |
| X2 | O | (64) Pin | X2 |

## 4-11. TIMER/TUNER CONTROL PERIPHERAL CIRCUIT INTERFACE (IC005 ON FL-24 BOARD)

| SIGNAL | I/O | Pin No. | INPUT OUTPUT LEVEL |
|---|---|---|---|
| AD0 | I | (100) Pin | |
| AD1 | I | ① Pin | |
| AD2 | I | ② Pin | |
| AD3 | I | ③ Pin | |
| AD4 | I | ④ Pin | |
| AD5 | I | ⑤ Pin | |
| E CS | O | ⑰ Pin | "H" pulse on the channel selection. |
| E CLK | O | ⑱ Pin | Pulse train when Pin ⑰ is "H". |
| E DATA | I/O | ⑲ Pin | Pulse train I/O when Pin ⑰ is "H". |
| E BUSY | I | ⑳ Pin | "L" pulse during Data writing. |
| VTR/$\overline{\text{TV}}$ | O | ㉑ Pin | "L" when the antenna selector is TV. |
| IN SEL 1 | O | ㉒ Pin | "H" when selecting LINE input on rear. |
| IN SEL 2 | O | ㉓ Pin | "H" when selecting LINE input on front. |
| POWER CONT | O | ㉗ Pin | "H" when the power is on. |
| $\overline{\text{POWER FAIL}}$ | I | ㉟ Pin | "L" when UN 5V is 4.0 – 4.3V or less. |
| $\overline{\text{TT CS}}$ | I | ㊱ Pin | 1V cycle "L" pulse. |
| $\overline{\text{TU V DET}}$ | I | ㊳ Pin | "L" during TUNER VIDEO receiving. |
| $\overline{\text{VPS CS}}$ | O | ㊷ Pin | 1V cycle "L" pulse. |
| WG/$\overline{\text{UK}}$ | I | ㊸ Pin | "H" for AEP model, "L" for UK model. |
| TA MUTE | O | ㊺ Pin | "H" pulse when the channel selection. |
| $\overline{\text{STEREO}}$ | I | ㊻ Pin | "L" during TUNER STEREO receiving. |
| $\overline{\text{BILINGUAL}}$ | I | ㊼ Pin | "L" during TUNER BILINGUAL receiving. |
| LATCH | O | ㊾ Pin | "H" pulse when the channel selection. |
| CLOCK | O | ㊿ Pin | Pulse train when Pin ㊾ is "H". |
| DATA | O | (51) Pin | Pulse train when Pin ㊾ is "H". |

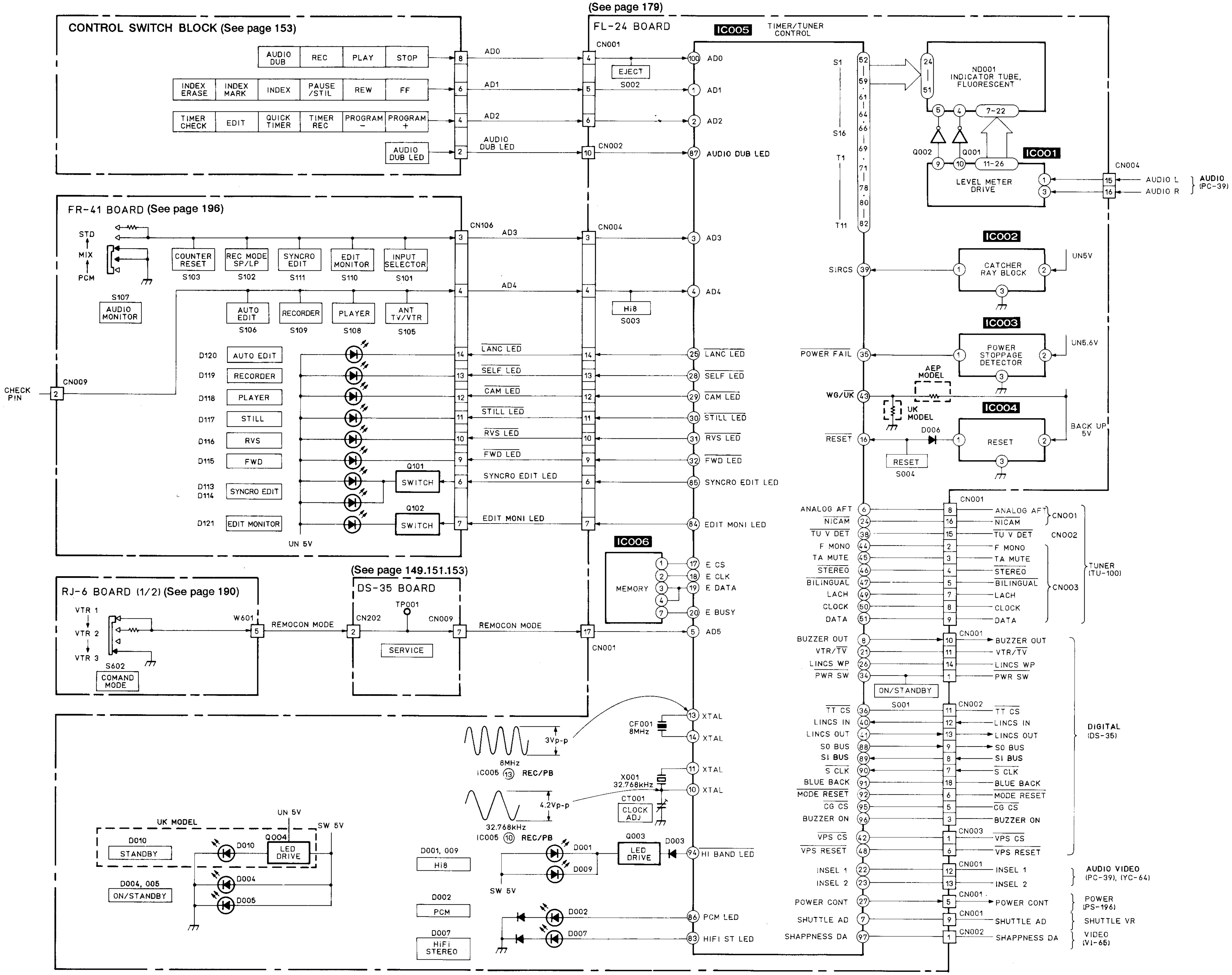
| | 0V | 1 | 1.6 | 2.3 | 2.9 | 3.6 | 4.3 |
|---|---|---|---|---|---|---|---|
| AD0 | EJECT | STOP | PB | REC | A INS | | |
| AD1 | FF | REW | PAUSE | INDEX | MARK | ERASE | |
| AD2 | CH + | CH – | T. REC | QUICK TIMER | EDIT | TIMED CHECK | TEST 2 |
| AD3 | INPUT SELECT | EDIT MONITOR | SYNCRO EDIT | SP/LP | COUNTER RESET | AUDIO M1 | AUDIO M2 |
| AD4 | HI 8 | TV/VTR | PLAYER | RECORDER | EDIT STANBY | X120 | TEST 1 |
| AD5 | SERVICE | | | | | REMOCON 1 | REMOCON 2 |

| | PCM | MIX | STD |
|---|---|---|---|
| AUDIO M1 | × | ○ | × |
| AUDIO M2 | × | × | ○ |

| | VTR1 | VTR2 | VTR3 |
|---|---|---|---|
| REMOCON 1 | ○ | × | × |
| REMOCON 2 | × | ○ | × |

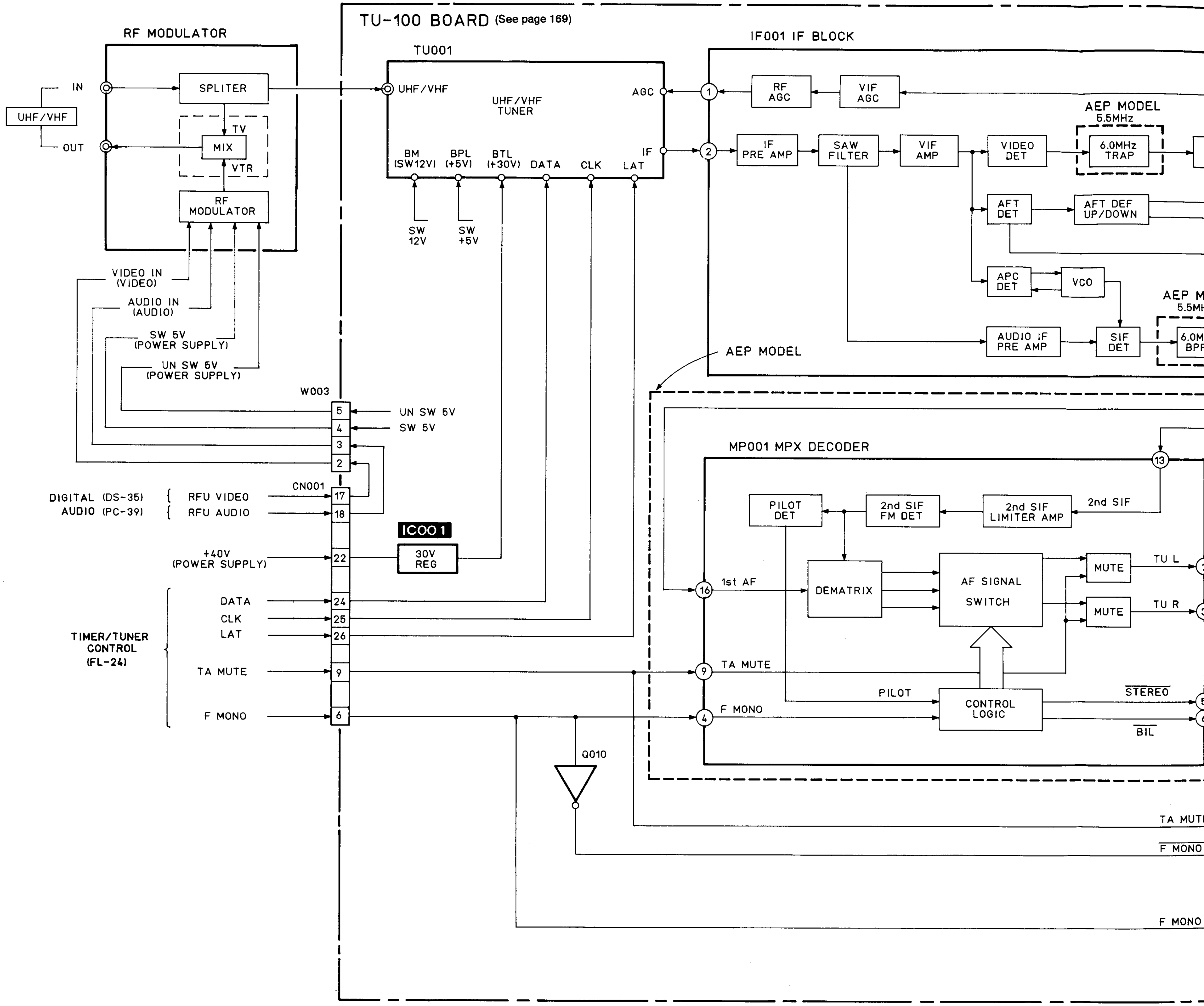
# MEMO

## 4-12. CONTROL DISPLAY BLOCK DIAGRAM

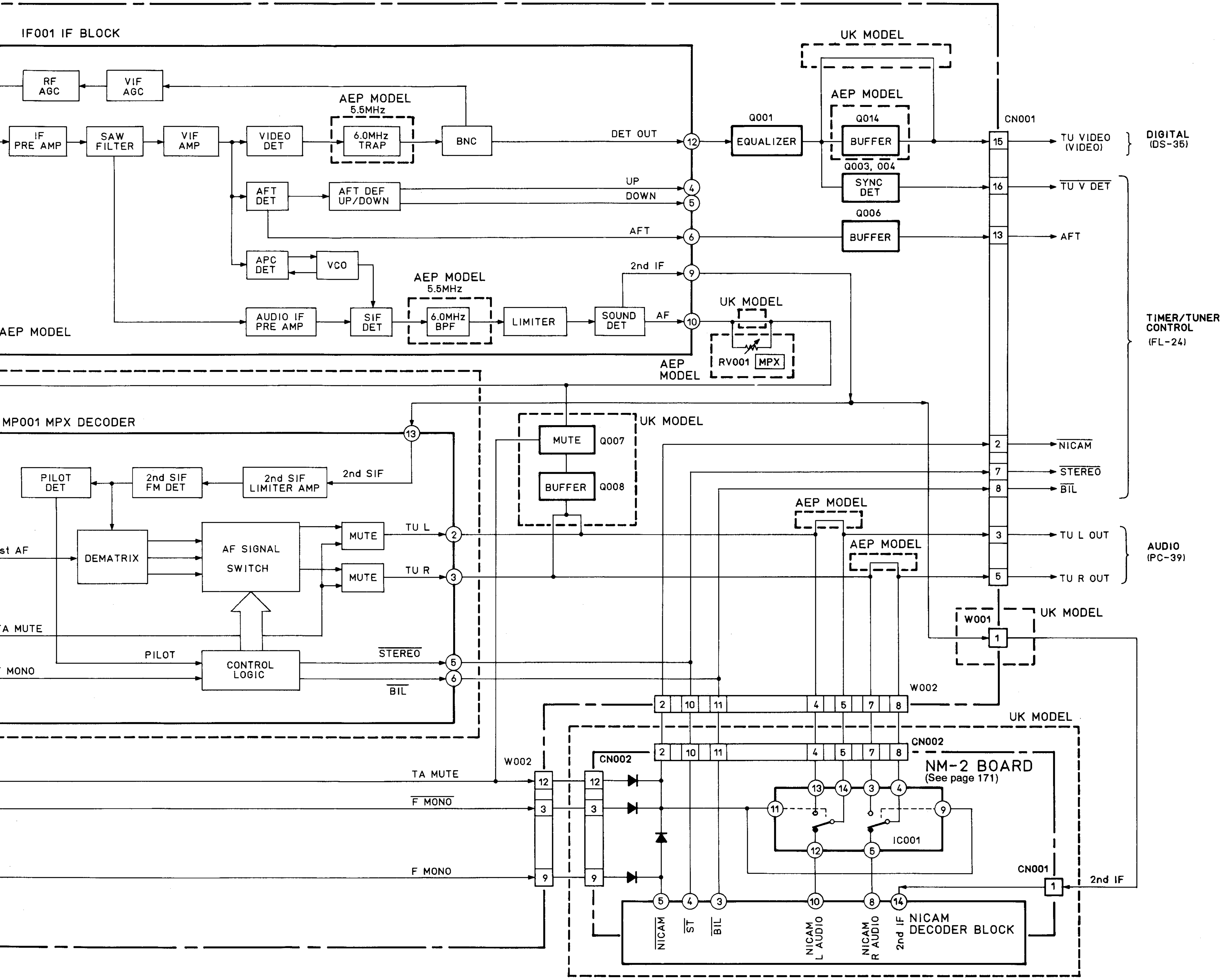


CONTROL SWITCH BLOCK (See page 153)
AUDIO DUB
REC
PLAY
STOP
INDEX ERASE
INDEX MARK
INDEX
PAUSE /STIL
REW
FF
TIMER CHECK
EDIT
QUICK TIMER
TIMER REC
PROGRAM −
PROGRAM +
AUDIO DUB LED
AD0
AD1
AD2
AUDIO DUB LED
FR-41 BOARD (See page 196)
STD
MIX
PCM
S107
AUDIO MONITOR
COUNTER RESET
S103
REC MODE SP/LP
S102
SYNCRO EDIT
S111
EDIT MONITOR
S110
INPUT SELECTOR
S101
AUTO EDIT
S106
RECORDER
S109
PLAYER
S108
ANT TV/VTR
S105
CN106
AD3
AD4
D120
AUTO EDIT
D119
RECORDER
D118
PLAYER
D117
STILL
D116
RVS
D115
FWD
D113
D114
SYNCRO EDIT
D121
EDIT MONITOR
Q101
SWITCH
Q102
SWITCH
UN 5V
LANC LED
SELF LED
CAM LED
STILL LED
RVS LED
FWD LED
SYNCRO EDIT LED
EDIT MONI LED
CHECK PIN
CN009
RJ-6 BOARD (1/2) (See page 190)
VTR 1
VTR 2
VTR 3
W601
S602
COMAND MODE
REMOCON MODE
(See page 149.151.153)
DS-35 BOARD
TP001
CN202
CN009
SERVICE
REMOCON MODE
(See page 179)
FL-24 BOARD
IC005
TIMER/TUNER CONTROL
CN001
EJECT
S002
CN002
CN004
Hi8
S003
CN001
AD0
AD1
AD2
AUDIO DUB LED
AD3
AD4
LANC LED
SELF LED
CAM LED
STILL LED
RVS LED
FWD LED
SYNCRO EDIT LED
EDIT MONI LED
IC006
MEMORY
E CS
E CLK
E DATA
E BUSY
AD5
XTAL
XTAL
XTAL
XTAL
CF001 8MHz
3Vp-p
8MHz
IC005 ⑬ REC/PB
X001 32.768kHz
CT001 CLOCK ADJ
4.2Vp-p
32.768kHz
IC005 ⑩ REC/PB
HI BAND LED
PCM LED
HIFI ST LED
Q003 LED DRIVE
D003
D001
D009
D001, 009
Hi8
SW 5V
D002
PCM
D002
D007
HiFi STEREO
D007
UK MODEL
D010
STANDBY
D010
Q004
LED DRIVE
UN 5V
SW 5V
D004
D005
D004, 005
ON/STANDBY
S1
S16
T1
T11
ND001 INDICATOR TUBE, FLUORESCENT
7-22
Q002
Q001
IC001
11-26
LEVEL METER DRIVE
CN004
AUDIO L
AUDIO R
AUDIO (PC-39)
IC002
CATCHER RAY BLOCK
UN5V
SIRCS
IC003
POWER STOPPAGE DETECTOR
UN5.6V
POWER FAIL
AEP MODEL
WG/UK
UK MODEL
IC004
RESET
D006
BACK UP 5V
RESET
RESET
S004
ANALOG AFT
NICAM
TU V DET
F MONO
TA MUTE
STEREO
BILINGUAL
LACH
CLOCK
DATA
CN001
CN002
CN003
TUNER (TU-100)
BUZZER OUT
VTR/TV
LINCS WP
PWR SW
ON/STANDBY
S001
TT CS
LINCS IN
LINCS OUT
S0 BUS
SI BUS
S CLK
BLUE BACK
MODE RESET
CG CS
BUZZER ON
VPS CS
VPS RESET
DIGITAL (DS-35)
INSEL 1
INSEL 2
AUDIO VIDEO (PC-39), (YC-64)
POWER CONT
POWER (PS-196)
SHUTTLE AD
SHUTTLE VR
SHAPPNESS DA
VIDEO (VI-65)

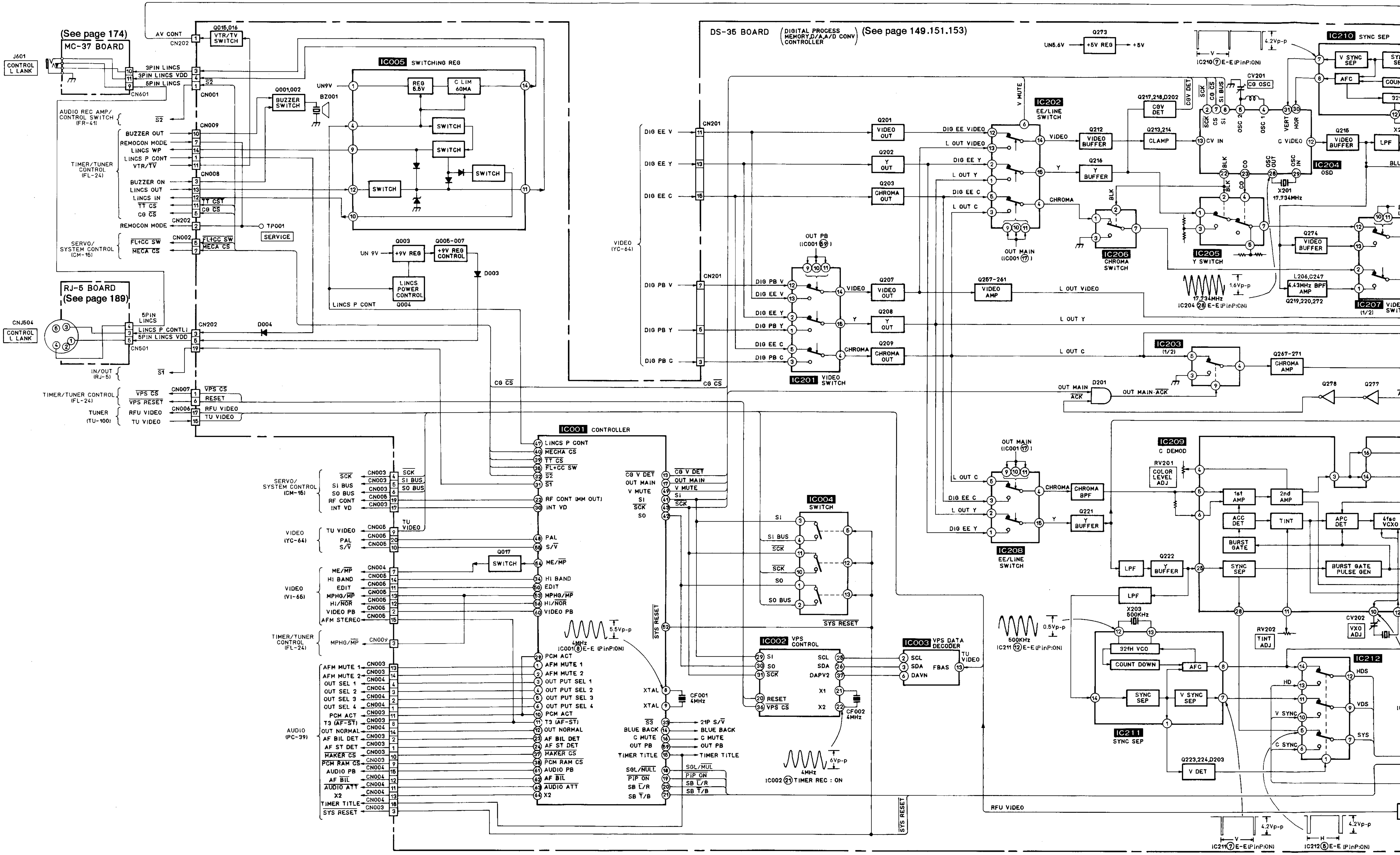
## 4-13. TUNER BLOCK DIAGRAM

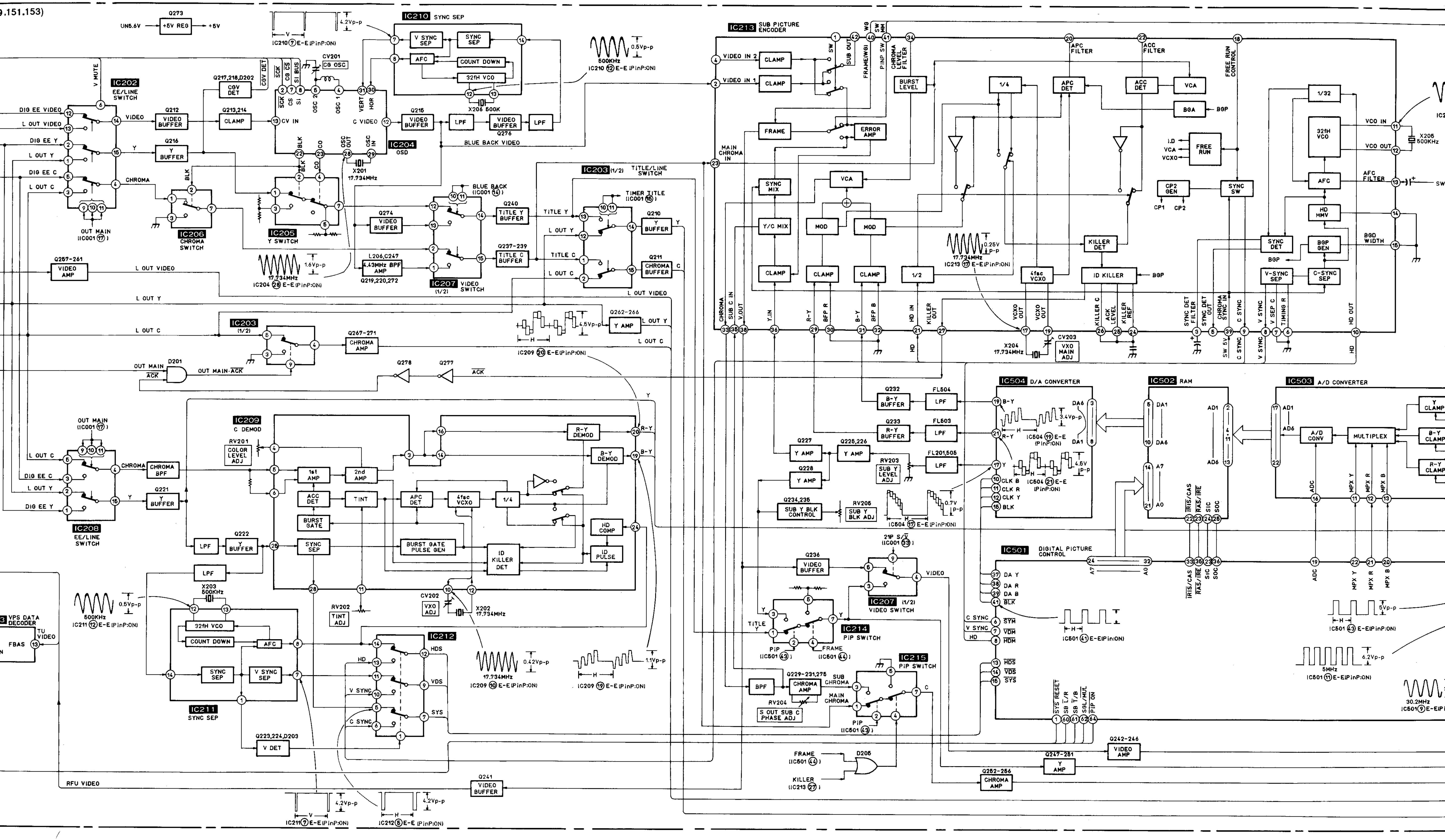


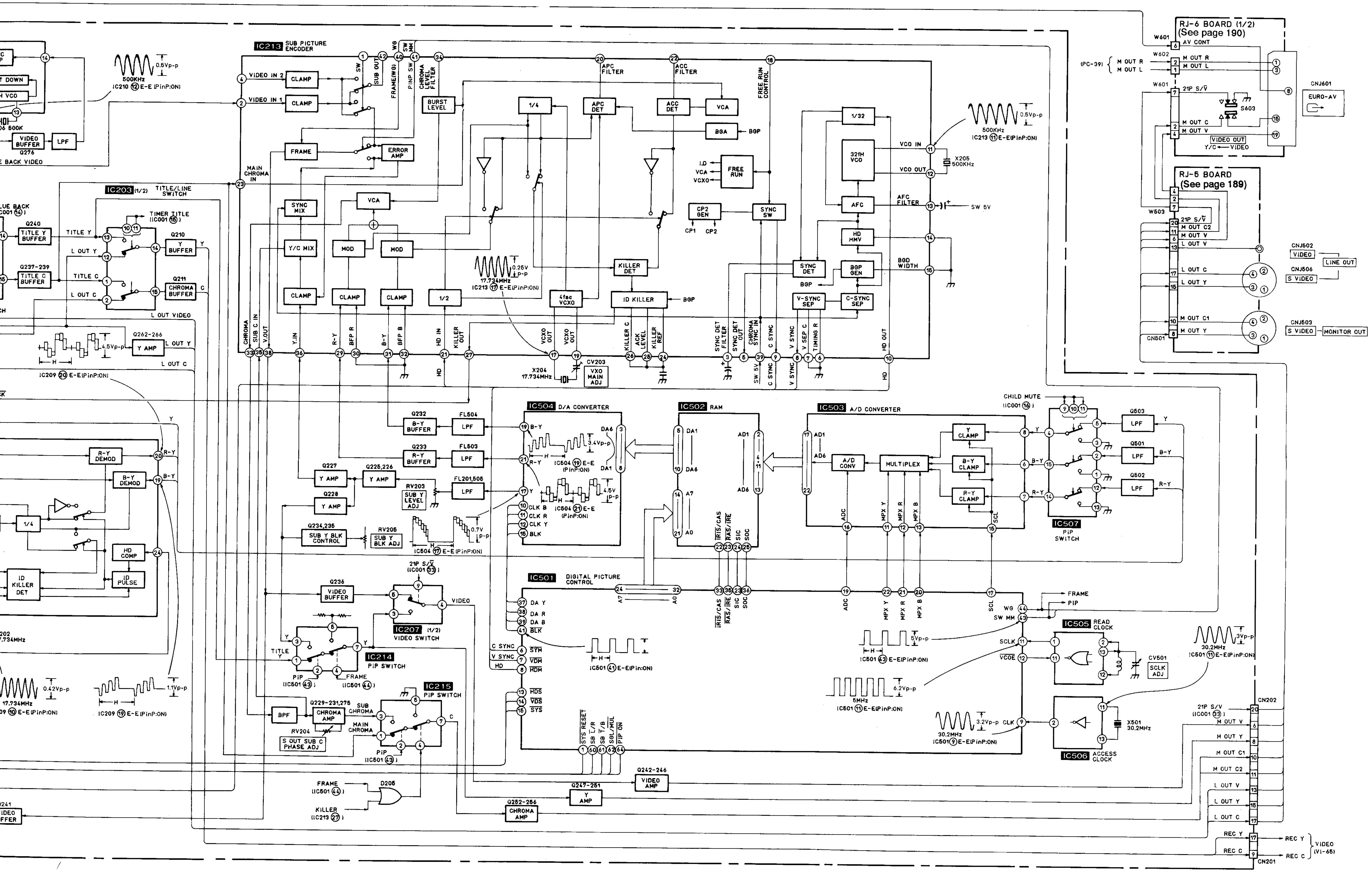
RF MODULATOR
UHF/VHF
IN
OUT
SPLITER
MIX
TV
VTR
RF MODULATOR
VIDEO IN (VIDEO)
AUDIO IN (AUDIO)
SW 5V (POWER SUPPLY)
UN SW 5V (POWER SUPPLY)
W003
5
4
3
2
UN SW 5V
SW 5V
CN001
17
18
DIGITAL (DS-35) { RFU VIDEO
AUDIO (PC-39) { RFU AUDIO
+40V (POWER SUPPLY)
22
IC001
30V REG
TIMER/TUNER CONTROL (FL-24)
DATA
CLK
LAT
TA MUTE
F MONO
24
25
26
9
6
Q010
TU-100 BOARD (See page 169)
TU001
UHF/VHF
UHF/VHF TUNER
AGC
IF
BM (SW12V)
BPL (+5V)
BTL (+30V)
DATA
CLK
LAT
SW 12V
SW +5V
IF001 IF BLOCK
1
2
RF AGC
VIF AGC
IF PRE AMP
SAW FILTER
VIF AMP
VIDEO DET
AEP MODEL
5.5MHz
6.0MHz TRAP
AFT DET
AFT DEF UP/DOWN
APC DET
VCO
AEP M
5.5MH
AUDIO IF PRE AMP
SIF DET
6.0M
BPF
AEP MODEL
MP001 MPX DECODER
13
2nd SIF
PILOT DET
2nd SIF FM DET
2nd SIF LIMITER AMP
16
1st AF
DEMATRIX
AF SIGNAL SWITCH
MUTE
MUTE
TU L
TU R
9
TA MUTE
PILOT
CONTROL LOGIC
STEREO
4
F MONO
BIL
TA MUTE
F MONO
F MONO


IF001 IF BLOCK
RF AGC
VIF AGC
AEP MODEL
5.5MHz
IF PRE AMP
SAW FILTER
VIF AMP
VIDEO DET
6.0MHz TRAP
BNC
DET OUT
AFT DET
AFT DEF UP/DOWN
UP
DOWN
AFT
APC DET
VCO
2nd IF
AEP MODEL
5.5MHz
AUDIO IF PRE AMP
SIF DET
6.0MHz BPF
LIMITER
SOUND DET
AF
AEP MODEL
UK MODEL
RV001
MPX
AEP MODEL
Q001
EQUALIZER
UK MODEL
AEP MODEL
Q014
BUFFER
Q003, 004
SYNC DET
Q006
BUFFER
CN001
TU VIDEO (VIDEO)
DIGITAL (DS-35)
TU V DET
AFT
TIMER/TUNER CONTROL (FL-24)
MP001 MPX DECODER
2nd SIF
PILOT DET
2nd SIF FM DET
2nd SIF LIMITER AMP
st AF
DEMATRIX
AF SIGNAL SWITCH
MUTE
MUTE
TU L
TU R
A MUTE
PILOT
CONTROL LOGIC
STEREO
BIL
MONO
UK MODEL
MUTE
Q007
BUFFER
Q008
NICAM
STEREO
BIL
AEP MODEL
AEP MODEL
TU L OUT
TU R OUT
AUDIO (PC-39)
UK MODEL
W001
W002
UK MODEL
CN002
W002
TA MUTE
F MONO
F MONO
CN002
NM-2 BOARD
(See page 171)
IC001
CN001
2nd IF
NICAM
ST
BIL
NICAM L AUDIO
NICAM R AUDIO
2nd IF
NICAM DECODER BLOCK

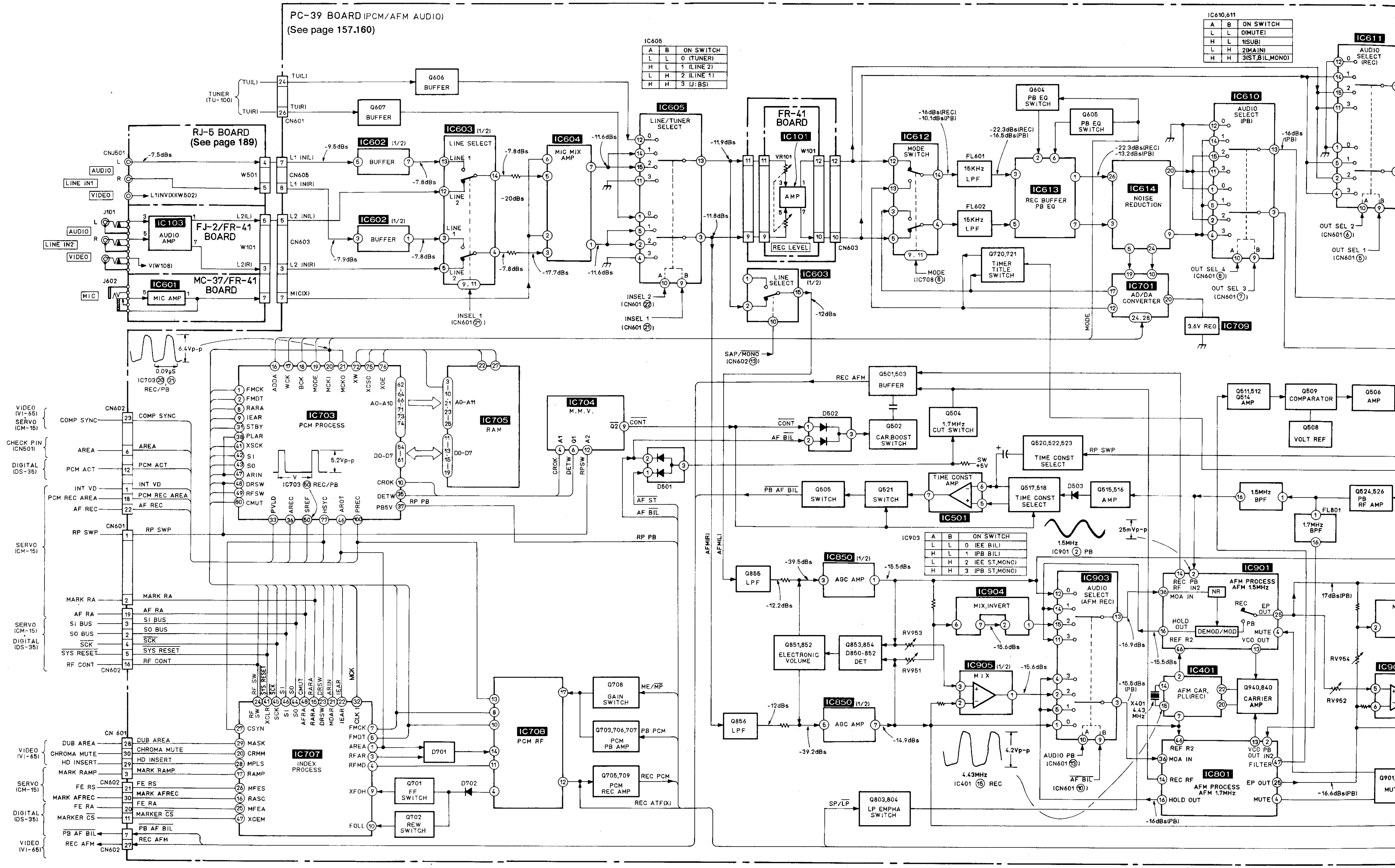
## 4-14. DIGITAL BLOCK DIAGRAM


(See page 174)
MC-37 BOARD
J601
CONTROL L LANK
AV CONT
CN202
3PIN LINCS
3PIN LINCS VDD
5PIN LINCS
CN601
Q015,016
VTR/TV SWITCH
IC005 SWITCHING REG
UN9V
REG 5.5V
C LIM 60MA
SWITCH
Q001,002
BUZZER SWITCH
BZ001
CN001
AUDIO REC AMP/ CONTROL SWITCH (FR-41)
S2
CN009
BUZZER OUT
REMOCON MODE
LINCS WP
LINCS P CONT
VTR/TV
TIMER/TUNER CONTROL (FL-24)
CN008
BUZZER ON
LINCS OUT
LINCS IN
TT CST
TT CS
CG CS
REMOCON MODE
TP001
SERVICE
SERVO/ SYSTEM CONTROL (CM-15)
CN002
FL+CC SW
MECA CS
Q003
Q005-007
UN 9V
+9V REG
+9V REG CONTROL
LINCS POWER CONTROL
Q004
LINCS P CONT
D003
RJ-5 BOARD
(See page 189)
CNJ504
CONTROL L LANK
5PIN LINCS
LINCS P CONTL
5PIN LINCS VDD
CN501
D004
IN/OUT (RJ-5)
S1
TIMER/TUNER CONTROL (FL-24)
CN007
VPS CS
VPS RESET
RESET
TUNER (TU-100)
CN006
RFU VIDEO
TU VIDEO
CG CS
IC001 CONTROLLER
LINCS P CONT
MECHA CS
TT CS
FL+CC SW
S2
S1
RF CONT (MM OUT)
INT VD
PAL
S/V
ME/MP
HI BAND
EDIT
MPHG/MP
HI/NOR
VIDEO PB
CG V DET
OUT MAIN
V MUTE
SI
SCK
SO
SERVO/ SYSTEM CONTROL (CM-15)
CN003
CN005
SI BUS
SO BUS
RF CONT
INT VD
VIDEO (YC-64)
TU VIDEO
TU VIDEO
Q017
SWITCH
VIDEO (VI-65)
CN004
AFM STEREO
TIMER/TUNER CONTROL (FL-24)
MPHG/MP
4MHz
5.5Vp-p
IC001⑧E-E (PinP:ON)
PCM ACT
AFM MUTE 1
AFM MUTE 2
OUT PUT SEL 1
OUT PUT SEL 2
OUT PUT SEL 3
OUT PUT SEL 4
OUT SEL 1
OUT SEL 2
OUT SEL 3
OUT SEL 4
T3 (AF-ST)
OUT NORMAL
AF BIL DET
AF ST DET
MAKER CS
PCM RAM CS
AUDIO PB
AF BIL
AUDIO ATT
X2
TIMER TITLE
SYS RESET
AUDIO (PC-39)
XTAL
CF001 4MHz
S3
BLUE BACK
C MUTE
OUT PB
SGL/NULL
SGL/MUL
PIP ON
SB L/R
SB T/B
21P S/V
SYS RESET
IC004 SWITCH
SI BUS
SO BUS
IC002 VPS CONTROL
SCL
SDA
DAPV2
X1
CF002 4MHz
6Vp-p
IC002 ㉑ TIMER REC : ON
IC003 VPS DATA DECODER
DAVN
FBAS
TU VIDEO
DS-35 BOARD
(DIGITAL PROCESS MEMORY,D/A,A/D CONV CONTROLLER)
(See page 149.151.153)
Q273
UN5.6V
+5V REG
+5V
CN201
DIG EE V
DIG EE Y
DIG EE C
DIG PB V
DIG PB Y
DIG PB C
VIDEO (YC-64)
Q201
VIDEO OUT
Q202
Y OUT
Q203
CHROMA OUT
IC202 EE/LINE SWITCH
DIG EE VIDEO
L OUT VIDEO
DIG EE Y
L OUT Y
DIG EE C
L OUT C
V MUTE
OUT MAIN (IC001 ⑰)
Q212 VIDEO BUFFER
Q216 Y BUFFER
CHROMA
BLK
IC206 CHROMA SWITCH
OUT PB (IC001 ㊾)
IC201 VIDEO SWITCH
Q207 VIDEO OUT
Q208 Y OUT
Q209 CHROMA OUT
Q257-261 VIDEO AMP
L OUT VIDEO
L OUT Y
L OUT C
IC203 (1/2)
Q267-271 CHROMA AMP
OUT MAIN
ACK
D201
OUT MAIN·ACK
Q278
Q277
Q217,218,D202
CGV DET
Q213,214
CLAMP
CV IN
IC205 Y SWITCH
IC210 SYNC SEP
1C210⑦E-E (PinP:ON)
4.2Vp-p
CV201
CG OSC
SCK
CG CS
SI BUS
OSC 2
OSC 1
VERT
HOR
C VIDEO
Q215 VIDEO BUFFER
LPF
IC204 OSD
X201 17.734MHz
17.734MHz
1.6Vp-p
IC204 ㉘ E-E (PinP:ON)
Q274 VIDEO BUFFER
L206,C247
4.43MHz BPF AMP
Q219,220,272
IC207 (1/2)
V SYNC SEP
AFC
IC208 EE/LINE SWITCH
OUT MAIN (IC001 ⑰)
CHROMA BPF
Q221 Y BUFFER
IC209 C DEMOD
RV201 COLOR LEVEL ADJ
1st AMP
2nd AMP
ACC DET
TINT
BURST GATE
APC DET
4fsc VCXO
SYNC SEP
BURST GATE PULSE GEN
LPF
Q222 Y BUFFER
X203 500KHz
0.5Vp-p
500KHz
IC211 ⑫ E-E (PinP:ON)
32fH VCO
COUNT DOWN
AFC
SYNC SEP
V SYNC SEP
IC211 SYNC SEP
RV202 TINT ADJ
CV202 VXO ADJ
IC212
HDS
VDS
SYS
HD
V SYNC
C SYNC
Q223,224,D203
V DET
RFU VIDEO
IC211⑦E-E (PinP:ON)
IC212⑥E-E (PinP:ON)


9.151.153)
Q273
UN5.6V
+5V REG
+5V
IC210 SYNC SEP
V SYNC SEP
SYNC SEP
AFC
COUNT DOWN
32fH VCO
X206 500K
4.2Vp-p
IC210 ⑦ E-E (PinP:ON)
500KHz
0.5Vp-p
IC210 ⑫ E-E (PinP:ON)
IC202
EE/LINE SWITCH
V MUTE
DIG EE VIDEO
L OUT VIDEO
DIG EE Y
L OUT Y
DIG EE C
L OUT C
OUT MAIN (IC001 ⑰)
Q212
VIDEO BUFFER
Q216
Y BUFFER
CHROMA
Q217,218,D202
CGV DET
Q213,214
CLAMP
CV IN
CV201
CG OSC
SCK
CG CS
SI BUS
OSC 2
OSC 1
VERT
HOR
C VIDEO
Q215
VIDEO BUFFER
LPF
VIDEO BUFFER
Q276
LPF
IC204
OSD
BLUE BACK VIDEO
BLK
CO
OSC OUT
OSC IN
X201
17.734MHz
IC206
CHROMA SWITCH
IC205
Y SWITCH
BLUE BACK (IC001 ⑭)
Q274
VIDEO BUFFER
L206,C247
4.43MHz BPF AMP
Q219,220,272
Q240
TITLE Y BUFFER
Q237-239
TITLE C BUFFER
IC207 (1/2)
VIDEO SWITCH
17.734MHz
1.6Vp-p
IC204 ㉘ E-E (PinP:ON)
Q257-261
VIDEO AMP
L OUT VIDEO
L OUT Y
L OUT C
IC203 (1/2)
TITLE/LINE SWITCH
TIMER TITLE (IC001 ⑮)
TITLE Y
TITLE C
Q210
Y BUFFER
Q211
CHROMA BUFFER
Q262-266
Y AMP
4.5Vp-p
IC209 ⑳ E-E (PinP:ON)
Q267-271
CHROMA AMP
D201
OUT MAIN
ACK
OUT MAIN-ACK
Q278
Q277
IC209
C DEMOD
RV201
COLOR LEVEL ADJ
1st AMP
2nd AMP
ACC DET
TINT
APC DET
4fsc VCXO
1/4
BURST GATE
BURST GATE PULSE GEN
SYNC SEP
ID KILLER DET
HD COMP
ID PULSE
R-Y DEMOD
B-Y DEMOD
R-Y
B-Y
RV202
TINT ADJ
CV202
VXO ADJ
X202
17.734MHz
IC208
EE/LINE SWITCH
CHROMA BPF
Q221
Y BUFFER
Q222
Y BUFFER
LPF
X203
500KHz
32fH VCO
COUNT DOWN
AFC
SYNC SEP
V SYNC SEP
IC211
SYNC SEP
Q223,224,D203
V DET
500KHz
0.5Vp-p
IC211 ⑫ E-E (PinP:ON)
IC212
HDS
HD
VDS
V SYNC
SYS
C SYNC
17.734MHz
0.42Vp-p
IC209 ⑩ E-E (PinP:ON)
1.1Vp-p
IC209 ⑲ E-E (PinP:ON)
VPS DATA DECODER
FBAS
TU VIDEO
RFU VIDEO
Q241
VIDEO BUFFER
4.2Vp-p
IC211 ⑦ E-E (PinP:ON)
4.2Vp-p
IC212 ⑤ E-E (PinP:ON)
IC213 SUB PICTURE ENCODER
VIDEO IN 2
VIDEO IN 1
CLAMP
SW
SUB OUT
FRAME(WG)
PINP SW
CHROMA LEVEL FILTER
BURST LEVEL
FRAME
ERROR AMP
MAIN CHROMA IN
SYNC MIX
VCA
Y/C MIX
MOD
1/2
APC FILTER
ACC FILTER
1/4
APC DET
ACC DET
VCA
BGA
BGP
FREE RUN CONTROL
I.D
VCXO
FREE RUN
CP2 GEN
CP1
CP2
SYNC SW
KILLER DET
ID KILLER
4fsc VCXO
0.25Vp-p
17.734MHz
IC213 ⑰ E-E (PinP:ON)
1/32
32fH VCO
VCO IN
VCO OUT
X205 500KHz
AFC
AFC FILTER
HD MMV
SYNC DET
BGP GEN
BGD WIDTH
V-SYNC SEP
C-SYNC SEP
CHROMA
SUB C IN
V.OUT
Y.IN
R-Y
BFP R
B-Y
BFP B
HD IN
KILLER OUT
VCXO OUT
KILLER C
ACK LEVEL
KILLER REF
SYNC DET FILTER
CHROMA SYNC IN
C SYNC
V SYNC
V SEP C
TIMING R
HD OUT
X204
17.734MHz
CV203
VXO MAIN ADJ
SW 5V
IC504 D/A CONVERTER
Q232
B-Y BUFFER
Q233
R-Y BUFFER
FL504
LPF
FL503
FL201,505
3.4Vp-p
IC504 ⑲ E-E (PinP:ON)
4.5Vp-p
IC504 ㉑ E-E (PinP:ON)
0.7Vp-p
IC504 ⑰ E-E (PinP:ON)
CLK B
CLK R
CLK Y
BLK
DA6
DA1
Q227
Y AMP
Q225,226
Q228
RV203
SUB Y LEVEL ADJ
Q234,235
SUB Y BLK CONTROL
RV205
SUB Y BLK ADJ
IC502 RAM
A7
A0
AD1
AD6
IRIS/CAS
RAS/IRE
SIC
SOC
IC503 A/D CONVERTER
A/D CONV
MULTIPLEX
ADC
MPX Y
MPX R
MPX B
Y CLAMP
B-Y CLAMP
R-Y CLAMP
IC501 DIGITAL PICTURE CONTROL
DA Y
DA R
DA B
SYM
VDM
HDM
HDS
VDS
SYS
SYS RESET
SB L/R
SB T/B
SGL/MUL
PIP ON
Q236
VIDEO BUFFER
2nd S/V (IC001 ㉝)
IC207 (1/2)
VIDEO SWITCH
VIDEO
IC214
PIP SWITCH
TITLE Y
PIP (IC501 ㊸)
FRAME (IC501 ㊹)
IC215
PIP SWITCH
BPF
Q229-231,275
CHROMA AMP
SUB CHROMA
MAIN CHROMA
RV204
S OUT SUB C PHASE ADJ
IC501 ㊶ E-E (Pin:ON)
5Vp-p
IC501 ㊸ E-E (PinP:ON)
5MHz
6.2Vp-p
IC501 ⑪ E-E (PinP:ON)
30.2MHz
IC501 ⑨ E-E (PinP...
Q242-246
VIDEO AMP
Q247-251
Y AMP
Q252-256
CHROMA AMP
FRAME (IC501 ㊹)
D205
KILLER (IC213 ㉗)


IC213 SUB PICTURE ENCODER
VIDEO IN 2
VIDEO IN 1
CLAMP
SUB OUT
FRAME(WG)
PINP SW
CHROMA LEVEL FILTER
BURST LEVEL
APC FILTER
ACC FILTER
FREE RUN CONTROL
1/4
APC DET
ACC DET
VCA
BGA
BGP
FRAME
ERROR AMP
MAIN CHROMA IN
FREE RUN
I.D
VCXO
CP2 GEN
CP1
CP2
SYNC SW
1/32
321H VCO
VCO IN
VCO OUT
AFC
AFC FILTER
SW 5V
HD MMV
BGD WIDTH
SYNC DET
BGP GEN
V-SYNC SEP
C-SYNC SEP
SYNC MIX
VCA
Y/C MIX
MOD
CLAMP
1/2
4fsc VCXO
KILLER DET
ID KILLER
500KHz
0.5Vp-p
IC213 ⑪ E-E(PinP:ON)
X205 500KHz
17.734MHz
0.25Vp-p
IC213 ⑰ E-E(PinP:ON)
CHROMA
SUB C IN
V.OUT
Y.IN
R-Y
BFP R
B-Y
BFP B
HD IN
KILLER OUT
VCXO OUT
KILLER C
ACK LEVEL
KILLER REF
SYNC DET FILTER
SYNC DET OUT
CHROMA SYNC IN
C SYNC
V SYNC
V SEP C
TIMING R
HD OUT
X204 17.734MHz
CV203 VXO MAIN ADJ
IC210 ⑫ E-E (PinP:ON)
T DOWN
H VCO
VIDEO BUFFER
LPF
Q276
E BACK VIDEO
IC203 (1/2) TITLE/LINE SWITCH
UE BACK
TIMER TITLE (IC001 ⑮)
Q240 TITLE Y BUFFER
TITLE Y
L OUT Y
Q210 Y BUFFER
Q237-239 TITLE C BUFFER
TITLE C
L OUT C
Q211 CHROMA BUFFER
L OUT VIDEO
Q262-266 Y AMP
L OUT Y
L OUT C
4.5Vp-p
IC209 ⑳ E-E(PinP:ON)
R-Y DEMOD
B-Y DEMOD
1/4
HD COMP
ID KILLER DET
ID PULSE
17.734MHz
0.42Vp-p
1.1Vp-p
IC209 ⑩ E-E(PinP:ON)
IC209 ⑲ E-E(PinP:ON)
Q241 VIDEO BUFFER
Q232 B-Y BUFFER
FL504 LPF
Q233 R-Y BUFFER
FL503 LPF
Q227 Y AMP
Q225,226 Y AMP
RV203 SUB Y LEVEL ADJ
FL201,505 LPF
Q228 Y AMP
Q234,235 SUB Y BLK CONTROL
RV205 SUB Y BLK ADJ
0.7Vp-p
IC504 ⑰ E-E(PinP:ON)
IC504 D/A CONVERTER
B-Y
R-Y
CLK B
CLK R
CLK Y
BLK
DA6
DA1
3.4Vp-p
IC504 ⑲ E-E (PinP:ON)
4.5Vp-p
IC504 ㉑ E-E (PinP:ON)
IC502 RAM
DA1
DA6
A7
A0
AD1
AD6
IRIS/CAS
RAS/IRE
SIC
SOC
IC503 A/D CONVERTER
A/D CONV
MULTIPLEX
ADC
MPX Y
MPX R
MPX B
SCL
Y CLAMP
B-Y CLAMP
R-Y CLAMP
CHILD MUTE (IC001 ⑯)
Q503 LPF
Q501 LPF
Q502 LPF
IC507 PiP SWITCH
IC501 DIGITAL PICTURE CONTROL
DA Y
DA R
DA B
BLK
SYM
VDM
HDM
HDS
VDS
SYS
C SYNC
V SYNC
HD
SYS RESET
SB L/R
SB T/B
SGL/MUL
PIP ON
WG
SW MM
FRAME
PIP
SCLK
VCOE
CLK
IC505 READ CLOCK
CV501 SCLK ADJ
IC506 ACCESS CLOCK
X501 30.2MHz
30.2MHz
3Vp-p
IC501 ⑪ E-E(PinP:ON)
5Vp-p
IC501 ㊸ E-E(PinP:ON)
5MHz
6.2Vp-p
IC501 ⑪ E-E(PinP:ON)
30.2MHz
3.2Vp-p
IC501 ⑨ E-E(PinP:ON)
IC501 ㊶ E-E(PinP:ON)
Q236 VIDEO BUFFER
21P S/V (IC001 ㉝)
IC207 (1/2) VIDEO SWITCH
VIDEO
TITLE Y
IC214 PiP SWITCH
PiP (IC501 ㊸)
FRAME (IC501 ㊹)
IC215 PiP SWITCH
BPF
Q229-231,275 CHROMA AMP
SUB CHROMA
MAIN CHROMA
RV204 S OUT SUB C PHASE ADJ
PiP (IC501 ㊸)
FRAME (IC501 ㊹)
KILLER (IC213 ㉗)
D205
Q242-246 VIDEO AMP
Q247-251 Y AMP
Q252-256 CHROMA AMP
RJ-6 BOARD (1/2) (See page 190)
W601
AV CONT
W602
(PC-39)
M OUT R
M OUT L
21P S/V
S603
M OUT C
M OUT V
VIDEO OUT
Y/C ← VIDEO
CNJ601 EURO-AV
RJ-5 BOARD (See page 189)
W503
M OUT C2
L OUT V
L OUT C
L OUT Y
M OUT C1
M OUT Y
CN501
CNJ502 VIDEO
LINE OUT
CNJ506 S VIDEO
CNJ503 S VIDEO
MONITOR OUT
CN202
21P S/V (IC001 ㉝)
M OUT V
M OUT Y
M OUT C1
M OUT C2
L OUT V
L OUT Y
L OUT C
REC Y
REC C
CN201
VIDEO (VI-65)

## 4-15. AUDIO BLOCK DIAGRAM


PC-39 BOARD (PCM/AFM AUDIO)
(See page 157.160)
RJ-5 BOARD
(See page 189)
FJ-2/FR-41 BOARD
MC-37/FR-41 BOARD
FR-41 BOARD
TUNER (TU-100)
LINE IN1
LINE IN2
AUDIO
VIDEO
MIC
IC103 AUDIO AMP
IC601 MIC AMP
Q606 BUFFER
Q607 BUFFER
IC602 (1/2) BUFFER
IC603 (1/2) LINE SELECT
IC604 MIC MIX AMP
IC605 LINE/TUNER SELECT
IC101 AMP
VR101
W101
REC LEVEL
IC603 (1/2) LINE SELECT
SAP/MONO (CN602 ⑬)
IC612 MODE SWITCH
FL601 15KHz LPF
FL602 15KHz LPF
Q604 PB EQ SWITCH
Q605 PB EQ SWITCH
IC613 REC BUFFER PB EQ
IC614 NOISE REDUCTION
IC610 AUDIO SELECT (PB)
IC611 AUDIO SELECT (REC)
IC701 AD/DA CONVERTER
Q720,721 TIMER TITLE SWITCH
IC709 3.6V REG
IC703 PCM PROCESS
IC705 RAM
IC704 M.M.V.
IC707 INDEX PROCESS
IC708 PCM RF
Q708 GAIN SWITCH
Q703,706,707 PCM PB AMP
Q705,709 PCM REC AMP
Q701 FF SWITCH
Q702 REW SWITCH
D701
D702
Q501,503 BUFFER
Q502 CAR.BOOST SWITCH
Q504 1.7MHz CUT SWITCH
D502
D501
Q520,522,523 TIME CONST SELECT
Q517,518 TIME CONST SELECT
IC501 TIME CONST AMP
D503
Q515,516 AMP
Q505 SWITCH
Q521 SWITCH
Q511,512 Q514 AMP
Q509 COMPARATOR
Q506 AMP
Q508 VOLT REF
1.5MHz BPF
1.7MHz BPF
FL801
Q524,526 PB RF AMP
Q855 LPF
Q856 LPF
IC850 (1/2) AGC AMP
Q851,852 ELECTRONIC VOLUME
Q853,854 D850-852 DET
RV953
RV951
IC904 MIX,INVERT
IC905 (1/2) MIX
IC903 AUDIO SELECT (AFM REC)
IC901 AFM PROCESS AFM 1.5MHz
NR
DEMOD/MOD
IC401 AFM CAR. PLL(REC)
Q940,840 CARRIER AMP
X401 4.43 MHz
IC801 AFM PROCESS AFM 1.7MHz
RV954
RV952
Q803,804 LP EMPHA SWITCH
SP/LP
6.4Vp-p
0.09μS
IC703 ⑳ ㉑ REC/PB
5.2Vp-p
IC703 ㊿ REC/PB
1.5MHz
IC901 ② PB
25mVp-p
4.2Vp-p
4.43MHz
IC401 ⑮ REC
-7.5dBs
-9.5dBs
-7.8dBs
-7.9dBs
-20dBs
-17.7dBs
-11.6dBs
-11.9dBs
-11.8dBs
-12dBs
-16dBs(REC) -10.1dBs(PB)
-22.3dBs(REC) -16.5dBs(PB)
-22.3dBs(REC) -13.2dBs(PB)
-16dBs (PB)
-39.5dBs
-15.5dBs
-12.2dBs
-39.2dBs
-14.9dBs
-15.6dBs
-16.9dBs
-15.5dBs
-15.5dBs (PB)
17dBs(PB)
-16.6dBs(PB)
-16dBs(PB)
INSEL 1 (CN601 ㉑)
INSEL 2 (CN601 ㉒)
MODE (IC708 ⑧)
OUT SEL 1 (CN601 ⑤)
OUT SEL 2 (CN601 ⑥)
OUT SEL 3 (CN601 ⑦)
OUT SEL 4 (CN601 ⑧)
AUDIO PB (CN601 ⑬)
AF BIL (CN601 ⑩)
VIDEO (VI-65)
SERVO (CM-15)
CHECK PIN (CN501)
DIGITAL (DS-35)
COMP SYNC
AREA
PCM ACT
INT VD
PCM REC AREA
AF REC
RP SWP
MARK RA
AF RA
SI BUS
SO BUS
SCK
SYS RESET
RF CONT
DUB AREA
CHROMA MUTE
HD INSERT
MARK RAMP
FE RS
MARK AFREC
FE RA
MARKER CS
PB AF BIL
REC AFM
CN601
CN602
CN603
CN605
CNJ501
J101
J602
W501
CONT
AF BIL
AF ST
PB AF BIL
REC AFM
RP PB
ME/MP
PB PCM
REC PCM
REC ATF(X)
SW +5V
AFM(R)
AFM(L)
MODE

IC605

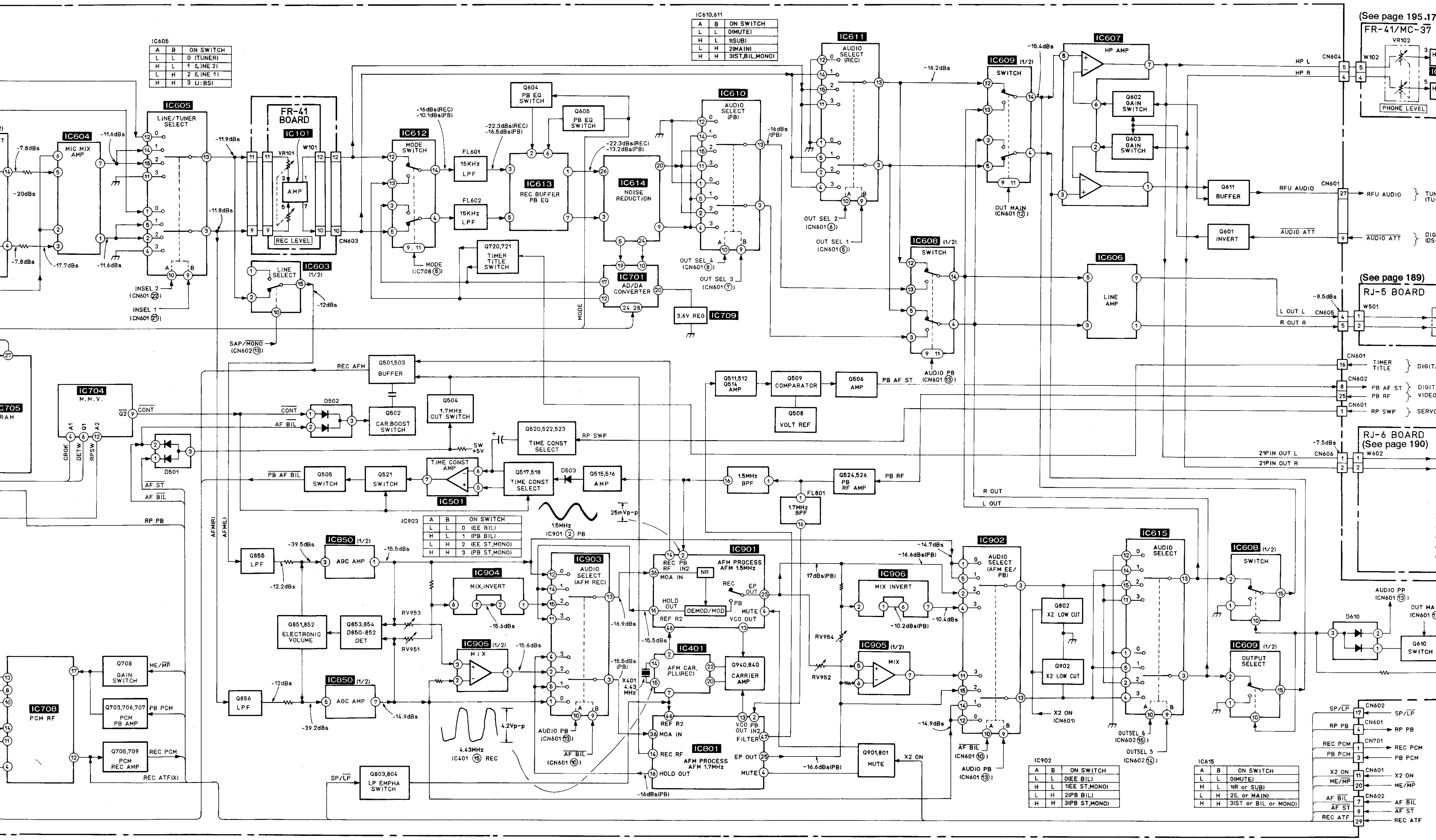
| A | B | ON SWITCH |
|---|---|---|
| L | L | 0 (TUNER) |
| H | L | 1 (LINE 2) |
| L | H | 2 (LINE 1) |
| H | H | 3 (J:BS) |

IC610,611

| A | B | ON SWITCH |
|---|---|---|
| L | L | 0(MUTE) |
| H | L | 1(SUB) |
| L | H | 2(MAIN) |
| H | H | 3(ST,BIL,MONO) |

IC903

| A | B | ON SWITCH |
|---|---|---|
| L | L | 0 (EE BIL) |
| H | L | 1 (PB BIL) |
| L | H | 2 (EE ST,MONO) |
| H | H | 3 (PB ST,MONO) |


(See page 195.17
FR-41/MC-37
PHONE LEVEL
VR102
W102
(See page 189)
RJ-5 BOARD
W501
RJ-6 BOARD
(See page 190)
W602
IC604
MIC MIX AMP
IC605
LINE/TUNER SELECT
INSEL 2 (CN601 ㉒)
INSEL 1 (CN601 ㉑)
FR-41 BOARD
IC101
VR101
W101
AMP
REC LEVEL
CN603
IC603 (1/2)
LINE SELECT
SAP/MONO (CN602 ⑬)
IC612
MODE SWITCH
MODE (IC708 ⑧)
FL601
15KHz LPF
FL602
15KHz LPF
Q604
PB EQ SWITCH
Q605
PB EQ SWITCH
IC613
REC BUFFER PB EQ
IC614
NOISE REDUCTION
IC701
AD/DA CONVERTER
Q720,721
TIMER TITLE SWITCH
3.6V REG
IC709
IC610
AUDIO SELECT (PB)
OUT SEL 4 (CN601 ⑧)
OUT SEL 3 (CN601 ⑦)
IC611
AUDIO SELECT (REC)
OUT SEL 2 (CN601 ⑥)
OUT SEL 1 (CN601 ⑤)
IC609 (1/2)
SWITCH
OUT MAIN (CN601 ⑫)
IC607
HP AMP
Q602
GAIN SWITCH
Q603
GAIN SWITCH
Q611
BUFFER
Q601
INVERT
HP L
HP R
CN604
RFU AUDIO
AUDIO ATT
CN601
TUNER (TU-
DIG (DS-
IC608 (1/2)
SWITCH
AUDIO PB (CN601 ⑬)
IC606
LINE AMP
L OUT L
R OUT R
CN605
TIMER TITLE
DIGITA
PB AF ST
PB RF
DIGIT VIDEO
RP SWP
SERVO
21PIN OUT L
21PIN OUT R
CN606
IC704
M.M.V.
CONT
CROK
DETW
RPSW
IC705
RAM
Q501,503
BUFFER
REC AFM
Q502
CAR.BOOST SWITCH
D502
AF BIL
Q504
1.7MHz CUT SWITCH
SW +5V
Q520,522,523
TIME CONST SELECT
D501
AF ST
AF BIL
PB AF BIL
Q505
SWITCH
Q521
SWITCH
TIME CONST AMP
IC501
Q517,518
TIME CONST SELECT
D503
Q515,516
AMP
Q511,512 Q514
AMP
Q509
COMPARATOR
Q508
VOLT REF
Q506
AMP
PB AF ST
1.5MHz BPF
Q524,526
PB RF AMP
PB RF
FL801
1.7MHz BPF
R OUT
L OUT
RP PB
AFM(R)
AFM(L)
Q855
LPF
IC850 (1/2)
AGC AMP
Q851,852
ELECTRONIC VOLUME
Q853,854 D850-852
DET
RV953
RV951
Q856
LPF
1.5MHz
IC901 ② PB
25mVp-p
IC903
AUDIO SELECT (AFM REC)
IC904
MIX,INVERT
IC905 (1/2)
MIX
4.2Vp-p
4.43MHz
IC401 ⑮ REC
AUDIO PB (CN601 ⑬)
AF BIL (CN601 ⑩)
X401 4.43 MHz
IC901
AFM PROCESS AFM 1.5MHz
REC RF
PB IN2
MOA IN
NR
HOLD OUT
DEMOD/MOD
REC
EP OUT
PB
MUTE
REF R2
VCO OUT
IC401
AFM CAR. PLL(REC)
Q940,840
CARRIER AMP
IC801
AFM PROCESS AFM 1.7MHz
VCO PB OUT IN2
FILTER
Q901,801
MUTE
X2 ON
IC906
MIX INVERT
RV954
RV952
IC905 (1/2)
MIX
IC902
AUDIO SELECT (AFM EE/PB)
AF BIL (CN601 ⑩)
AUDIO PB (CN601 ⑬)
Q802
X2 LOW CUT
Q902
X2 LOW CUT
X2 ON (CN601)
IC615
AUDIO SELECT
OUTSEL 6 (CN602 ⑮)
OUTSEL 5 (CN602 ⑭)
IC608 (1/2)
SWITCH
IC609 (1/2)
OUTPUT SELECT
D610
Q610
SWITCH
AUDIO PB (CN601 ⑬)
OUT MA (CN601
IC708
PCM RF
Q708
GAIN SWITCH
ME/MP
Q703,706,707
PCM PB AMP
PB PCM
Q705,709
PCM REC AMP
REC PCM
REC ATF(X)
SP/LP
Q803,804
LP EMPHA SWITCH
CN602
SP/LP
RP PB
CN701
REC PCM
PB PCM
X2 ON
ME/MP
AF BIL
AF ST
REC ATF
-7.8dBs
-20dBs
-17.7dBs
-11.6dBs
-11.9dBs
-11.8dBs
-12dBs
-16dBs(REC)
-10.1dBs(PB)
-22.3dBs(REC)
-16.5dBs(PB)
-22.3dBs(REC)
-13.2dBs(PB)
-16dBs (PB)
-16.2dBs
-15.4dBs
-8.5dBs
-7.5dBs
-39.5dBs
-15.5dBs
-12.2dBs
-15.6dBs
-16.9dBs
-15.5dBs (PB)
-39.2dBs
-14.9dBs
17dBs(PB)
-10.2dBs(PB)
-10.4dBs
-14.7dBs
-16.6dBs(PB)
-16dBs(PB)

IC605

| A | B | ON SWITCH |
|---|---|---|
| L | L | 0 (TUNER) |
| H | L | 1 (LINE 2) |
| L | H | 2 (LINE 1) |
| H | H | 3 (J:BS) |

IC610,611

| A | B | ON SWITCH |
|---|---|---|
| L | L | 0(MUTE) |
| H | L | 1(SUB) |
| L | H | 2(MAIN) |
| H | H | 3(ST,BIL,MONO) |

IC903

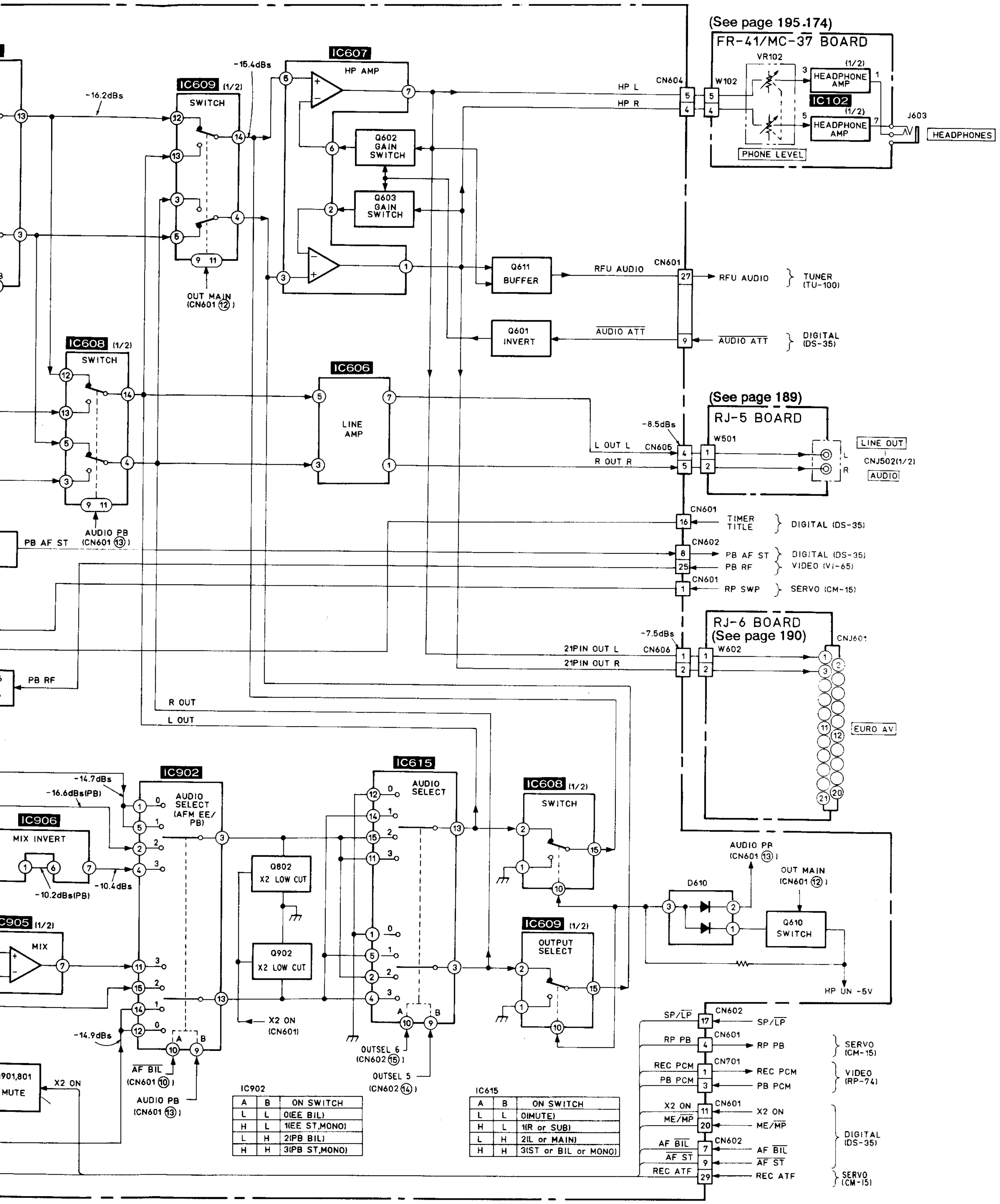
| A | B | ON SWITCH |
|---|---|---|
| L | L | 0 (EE BIL) |
| H | L | 1 (PB BIL) |
| L | H | 2 (EE ST,MONO) |
| H | H | 3 (PB ST,MONO) |

IC902

| A | B | ON SWITCH |
|---|---|---|
| L | L | 0(EE BIL) |
| H | L | 1(EE ST,MONO) |
| L | H | 2(PB BIL) |
| H | H | 3(PB ST,MONO) |

IC615

| A | B | ON SWITCH |
|---|---|---|
| L | L | 0(MUTE) |
| H | L | 1(R or SUB) |
| L | H | 2(L or MAIN) |
| H | H | 3(ST or BIL or MONO) |


(See page 195.174)
FR-41/MC-37 BOARD
VR102
PHONE LEVEL
W102
HEADPHONE AMP
IC102 (1/2)
HEADPHONE AMP
J603
HEADPHONES
IC607
HP AMP
-15.4dBs
-16.2dBs
IC609 (1/2)
SWITCH
OUT MAIN (CN601 ⑫)
Q602 GAIN SWITCH
Q603 GAIN SWITCH
HP L
HP R
CN604
Q611 BUFFER
RFU AUDIO
CN601
RFU AUDIO
TUNER (TU-100)
Q601 INVERT
AUDIO ATT
DIGITAL (DS-35)
IC608 (1/2)
SWITCH
IC606
LINE AMP
AUDIO PB (CN601 ⑬)
(See page 189)
RJ-5 BOARD
-8.5dBs
L OUT L
R OUT R
CN605
W501
LINE OUT
CNJ502(1/2)
AUDIO
TIMER TITLE
DIGITAL (DS-35)
CN602
PB AF ST
PB RF
DIGITAL (DS-35)
VIDEO (VI-65)
RP SWP
SERVO (CM-15)
PB AF ST
PB RF
RJ-6 BOARD
(See page 190)
-7.5dBs
21PIN OUT L
21PIN OUT R
CN606
W602
CNJ601
EURO AV
R OUT
L OUT
IC902
AUDIO SELECT (AFM EE/PB)
-14.7dBs
-16.6dBs(PB)
IC906
MIX INVERT
-10.4dBs
-10.2dBs(PB)
IC905 (1/2)
MIX
-14.9dBs
Q802 X2 LOW CUT
Q902 X2 LOW CUT
IC615
AUDIO SELECT
IC608 (1/2)
SWITCH
IC609 (1/2)
OUTPUT SELECT
D610
AUDIO PB (CN601 ⑬)
OUT MAIN (CN601 ⑫)
Q610 SWITCH
HP UN -5V
X2 ON (CN601)
OUTSEL 6 (CN602 ⑮)
OUTSEL 5 (CN602 ⑭)
901,801 MUTE
X2 ON
AF BIL (CN601 ⑩)
AUDIO PB (CN601 ⑬)
SP/LP
RP PB
REC PCM
PB PCM
X2 ON
ME/MP
AF BIL
AF ST
REC ATF
CN602
CN601
CN701
SERVO (CM-15)
VIDEO (RP-74)
DIGITAL (DS-35)
SERVO (CM-15)

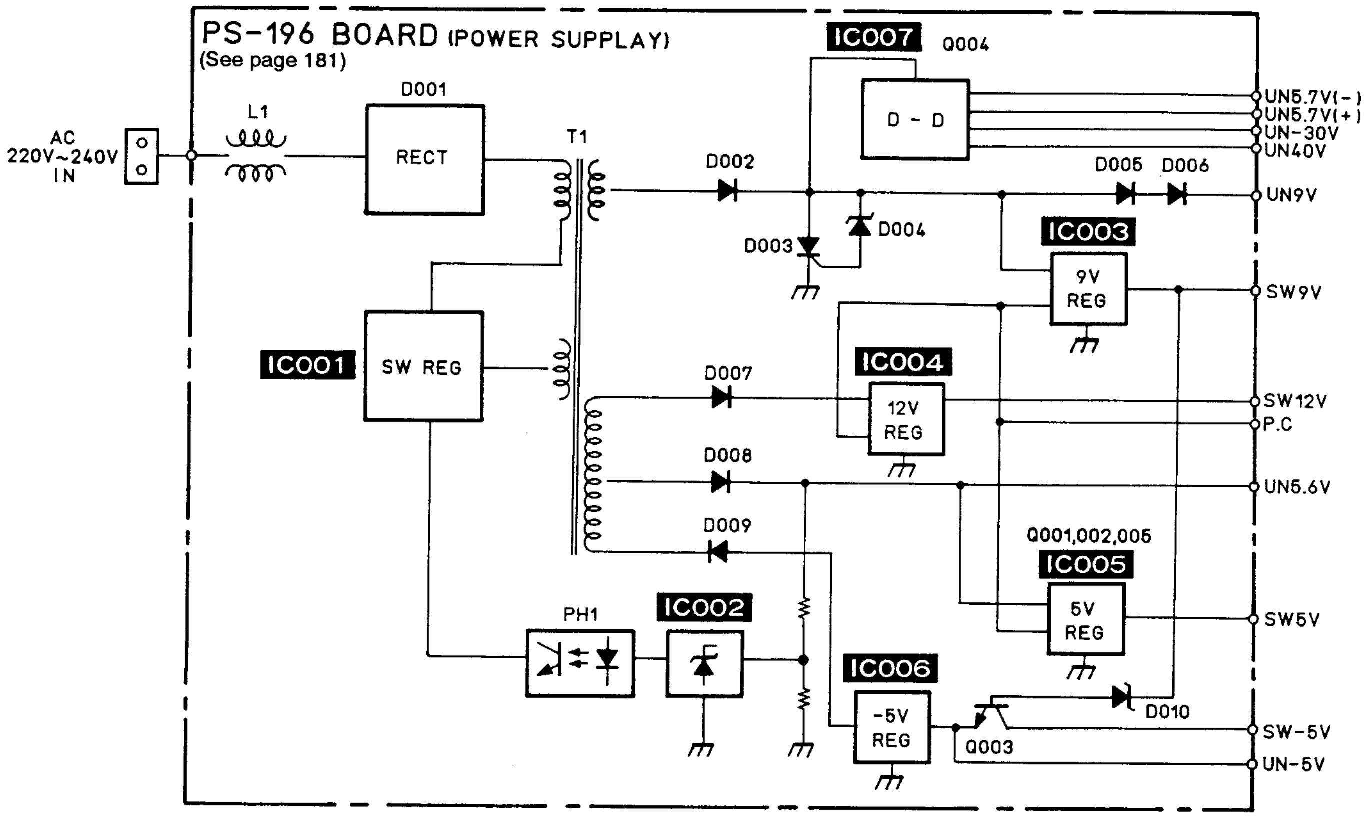
IC902

| A | B | ON SWITCH |
|---|---|---|
| L | L | 0(EE BIL) |
| H | L | 1(EE ST,MONO) |
| L | H | 2(PB BIL) |
| H | H | 3(PB ST,MONO) |

IC615

| A | B | ON SWITCH |
|---|---|---|
| L | L | 0(MUTE) |
| H | L | 1(R or SUB) |
| L | H | 2(L or MAIN) |
| H | H | 3(ST or BIL or MONO) |

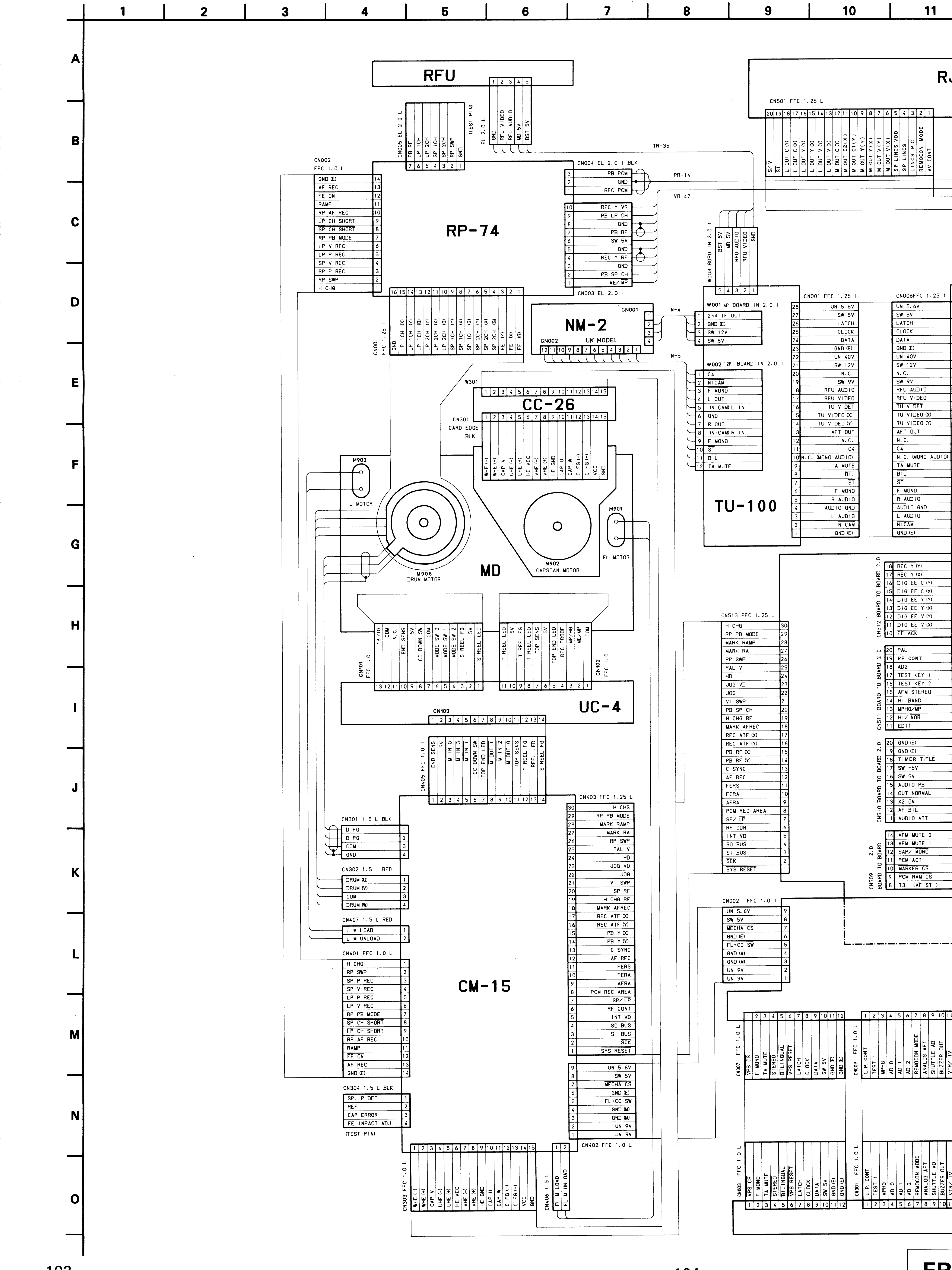
## 4-16. POWER BLOCK DIAGRAM


PS-196 BOARD (POWER SUPPLAY)
(See page 181)
AC 220V~240V IN
L1
D001
RECT
T1
IC001
SW REG
PH1
IC002
D002
D003
D004
D007
D008
D009
IC007
Q004
D - D
UN5.7V(-)
UN5.7V(+)
UN-30V
UN40V
D005
D006
UN9V
IC003
9V REG
SW9V
IC004
12V REG
SW12V
P.C
UN5.6V
Q001,002,005
IC005
5V REG
SW5V
IC006
-5V REG
Q003
D010
SW-5V
UN-5V

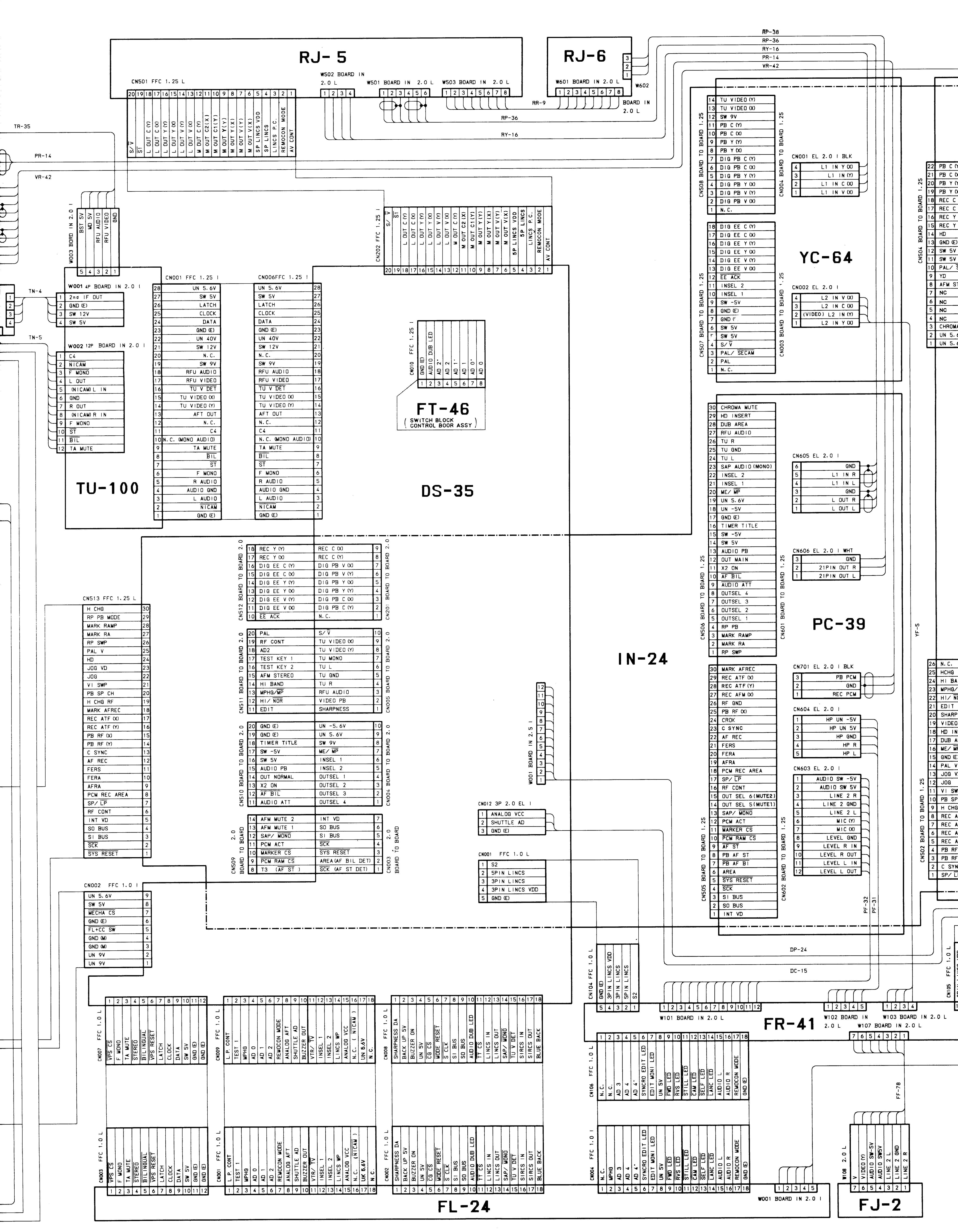
# SECTION 5

# PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

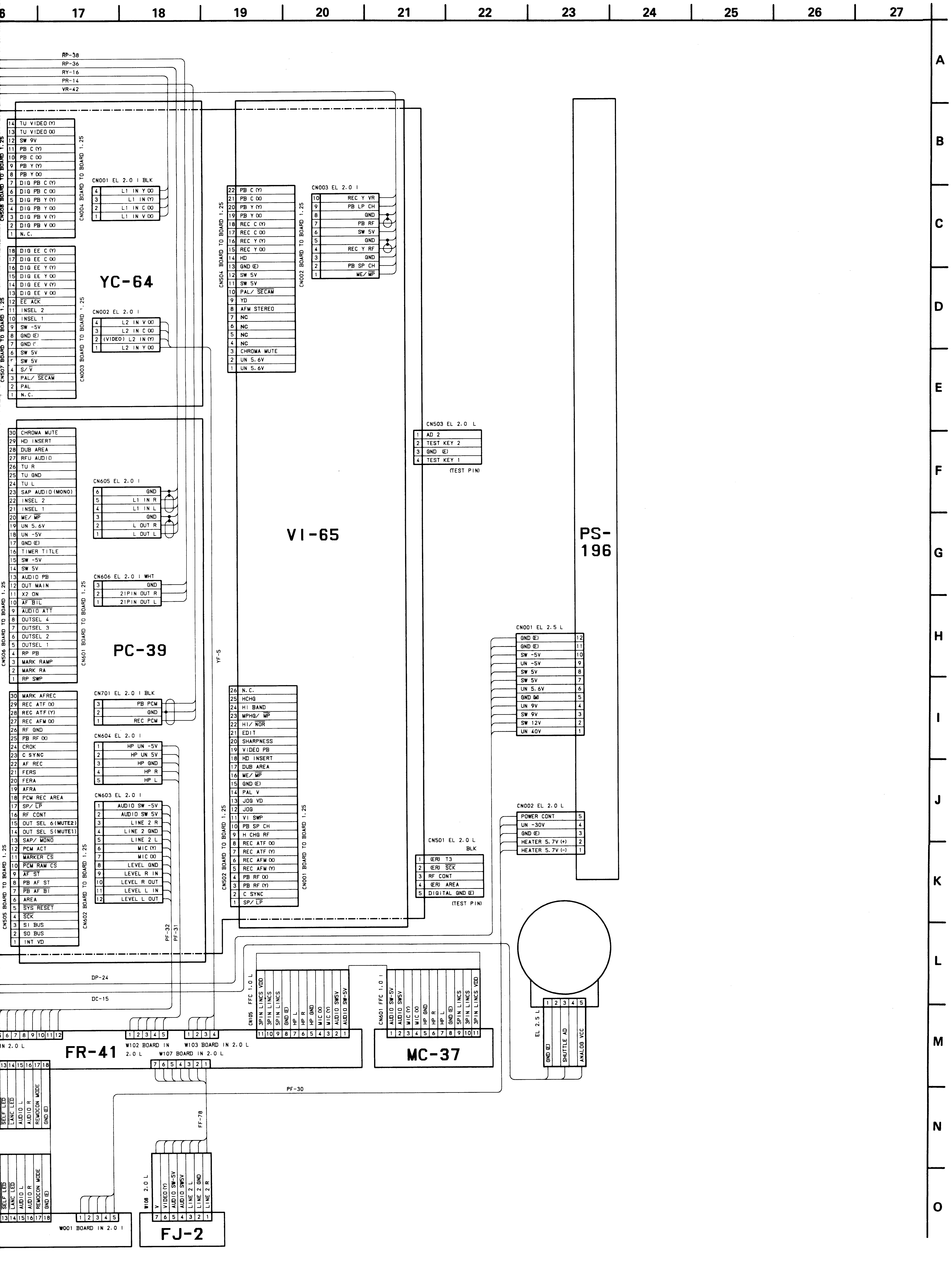
## 5-1. FRAME SCHEMATIC DIAGRAM



1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
RFU
RJ
RP-74
NM-2
CC-26
TU-100
MD
UC-4
CM-15
FR
CN002 FFC 1.0 L
GND (E)
AF REC
FE ON
RAMP
RP AF REC
LP CH SHORT
SP CH SHORT
RP PB MODE
LP V REC
LP P REC
SP V REC
SP P REC
RP SWP
H CHG
CN005 EL 2.0 L
PB RF
LP 1CH
LP 2CH
SP 1CH
SP 2CH
RP SWP
GND
(TEST PIN)
EL 2.0 L
GND
RFU VIDEO
RFU AUDIO
MD 5V
BST 5V
CN004 EL 2.0 I BLK
PB PCM
GND
REC PCM
PR-14
VR-42
TR-35
REC Y VR
PB LP CH
PB RF
SW 5V
REC Y RF
PB SP CH
ME/MP
CN003 EL 2.0 I
CN001 FFC 1.25 I
CN001
CN002
UK MODEL
TN-4
TN-5
W003 BORD IN 2.0 I
BST 5V
MD 5V
RFU AUDIO
RFU VIDEO
W001 4P BOARD IN 2.0 I
2nd IF OUT
GND (E)
SW 12V
SW 5V
W002 12P BOARD IN 2.0 I
C4
NICAM
F MONO
L OUT
(NICAM) L IN
GND
R OUT
(NICAM) R IN
F MONO
ST
BIL
TA MUTE
CN501 FFC 1.25 L
S/V
ST
L OUT C (Y)
L OUT C (X)
L OUT Y (Y)
L OUT Y (X)
L OUT V (Y)
L OUT V (X)
M OUT C (Y)
M OUT C2 (X)
M OUT C1 (Y)
M OUT Y (Y)
M OUT Y (X)
M OUT V (Y)
M OUT V (X)
SP LINCS VDD
SP LINCS
LINCS P.C.
REMOCON MODE
AV CONT
CN001 FFC 1.25 I
UN 5.6V
SW 5V
LATCH
CLOCK
DATA
GND (E)
UN 40V
SW 12V
N.C.
SW 9V
RFU AUDIO
RFU VIDEO
TU V DET
TU VIDEO (X)
TU VIDEO (Y)
AFT OUT
N.C.
C4
N.C. (MONO AUDIO)
TA MUTE
BIL
ST
F MONO
R AUDIO
AUDIO GND
L AUDIO
NICAM
GND (E)
CN006 FFC 1.25 I
W301
CN301 CARD EDGE BLK
WHE (-)
WHE (+)
CAP V
UHE (-)
UHE (+)
HE VCC
VHE (-)
VHE (+)
HE GND
CAP U
CAP W
C FG (-)
C FG (+)
VCC
GND
M903
L MOTOR
M901
FL MOTOR
M906 DRUM MOTOR
M902 CAPSTAN MOTOR
CN101 FFC 1.0
13/0 COM
N.C.
END SENS
5V
CC DOWN SW
COM
MODE SW 0
MODE SW 1
MODE SW 2
S REEL FG
5V
S REEL LED
CN102 FFC 1.0
T REEL LED
5V
T REEL FG
T REEL LED
TOP SENS
5V
TOP END LED
REC PROOF
MP/HG
ME/MP
COM
CN103
CN405 FFC 1.0 I
END SENS
5V
M IN 0
M IN 3
M IN 1
CC DOWN SW
TOP END LED
M OUT 1
M IN 2
M OUT 0
TOP SENS
T REEL FG
REEL LED
S REEL FG
CN403 FFC 1.25 L
H CHG
RP PB MODE
MARK RAMP
MARK RA
RP SWP
PAL V
HD
JOG VD
JOG
VI SWP
SP RF
H CHG RF
MARK AFREC
REC ATF (X)
REC ATF (Y)
PB Y (X)
PB Y (Y)
C SYNC
AF REC
FERS
FERA
AFRA
PCM REC AREA
SP/LP
RF CONT
INT VD
SO BUS
SI BUS
SCK
SYS RESET
CN513 FFC 1.25 L
PB SP CH
H CHG RF
REC ATF (X)
REC ATF (Y)
PB RF (X)
PB RF (Y)
CN301 1.5 L BLK
D FG
D PG
COM
GND
CN302 1.5 L RED
DRUM (U)
DRUM (V)
COM
DRUM (W)
CN407 1.5 L RED
L M LOAD
L M UNLOAD
CN401 FFC 1.0 L
H CHG
RP SWP
SP P REC
SP V REC
LP P REC
LP V REC
RP PB MODE
SP CH SHORT
LP CH SHORT
RP AF REC
RAMP
FE ON
AF REC
GND (E)
CN304 1.5 L BLK
SP.LP DET
REF
CAP ERROR
FE INPACT ADJ
(TEST PIN)
UN 5.6V
SW 5V
MECHA CS
GND (E)
FL+CC SW
GND (M)
GND (M)
UN 9V
UN 9V
CN402 FFC 1.0 L
CN303 FFC 1.0 L
CN406 1.5 L
FL M LOAD
FL M UNLOAD
CN002 FFC 1.0 I
CN512 BOARD TO BOARD 2.0
REC Y (Y)
REC Y (X)
DIG EE C (Y)
DIG EE C (X)
DIG EE Y (Y)
DIG EE Y (X)
DIG EE V (Y)
DIG EE V (X)
EE ACK
CN511 BOARD TO BOARD 2.0
PAL
RF CONT
AD2
TEST KEY 1
TEST KEY 2
AFM STEREO
HI BAND
MPHG/MP
HI/NOR
EDIT
CN510 BOARD TO BOARD 2.0
GND (E)
GND (E)
TIMER TITLE
SW -5V
SW 5V
AUDIO PB
OUT NORMAL
X2 ON
AF BIL
AUDIO ATT
CN509 BOARD TO BOARD 2.0
AFM MUTE 2
AFM MUTE 1
SAP/MONO
PCM ACT
MARKER CS
PCM RAM CS
T3 (AF ST)
CN007 FFC 1.0 L
CN003 FFC 1.0 L
VPS CS
F MONO
TA MUTE
STEREO
BILINGUAL
VPS RESET
LATCH
CLOCK
DATA
SW 5V
GND (E)
GND (E)
CN009 FFC 1.0 L
CN001 FFC 1.0 L
L.P. CONT
TEST 1
MPHG
AD 0
AD 1
AD 2
REMOCON MODE
ANALOG AFT
SHUTTLE AD
BUZZER OUT
VTR/TV


RJ-5
RJ-6
CN501 FFC 1.25 L
W502 BOARD IN 2.0 L
W501 BOARD IN 2.0 L
W503 BOARD IN 2.0 L
W601 BOARD IN 2.0 L
W602 BOARD IN 2.0 L
RP-38
RP-36
RY-16
PR-14
VR-42
RR-9
TR-35
TN-4
TN-5
W003 BORD IN 2.0 I
W001 4P BOARD IN 2.0 I
W002 12P BOARD IN 2.0 I
TU-100
CN001 FFC 1.25 I
CN006FFC 1.25 I
CN202 FFC 1.25 I
CN010 FFC 1.25 I
FT-46
( SWITCH BLOCK CONTROL BOOR ASSY )
DS-35
CN513 FFC 1.25 L
CN512 BOARD TO BOARD 2.0
CN201 BOARD TO BOARD 2.0
CN511 BOARD TO BOARD 2.0
CN005 BOARD TO BOARD 2.0
CN510 BOARD TO BOARD 2.0
CN004 BOARD TO BOARD 2.0
CN509 BOARD TO BOARD 2.0
CN003 BOARD TO BOARD 2.0
CN002 FFC 1.0 I
IN-24
W001 BOARD IN 2.5 I
CN012 3P 2.0 EL I
CN001 FFC 1.0 L
CN508 BOARD TO BOARD 1.25
CN004 BOARD TO BOARD 1.25
CN001 EL 2.0 I BLK
YC-64
CN507 BOARD TO BOARD 1.25
CN003 BOARD TO BOARD 1.25
CN002 EL 2.0 I
CN504 BOARD TO BOARD 1.25
CN605 EL 2.0 I
CN606 EL 2.0 I WHT
CN506 BOARD TO BOARD 1.25
CN601 BOARD TO BOARD 1.25
PC-39
YF-5
CN701 EL 2.0 I BLK
CN604 EL 2.0 I
CN603 EL 2.0 I
CN505 BOARD TO BOARD 1.25
CN602 BOARD TO BOARD 1.25
CN502 BOARD TO BOARD 1.25
PF-32
PF-31
DP-24
DC-15
CN104 FFC 1.0 L
W101 BOARD IN 2.0 L
W102 BOARD IN 2.0 L
W103 BOARD IN 2.0 L
W107 BOARD IN 2.0 L
FR-41
CN106 FFC 1.0 L
CN105 FFC 1.0 L
FF-78
CN007 FFC 1.0 L
CN009 FFC 1.0 L
CN008 FFC 1.0 L
CN003 FFC 1.0 L
CN001 FFC 1.0 L
CN002 FFC 1.0 L
CN004 FFC 1.0 I
W001 BOARD IN 2.0 I
W108 2.0 L
FL-24
FJ-2

FRAME FRAME


17
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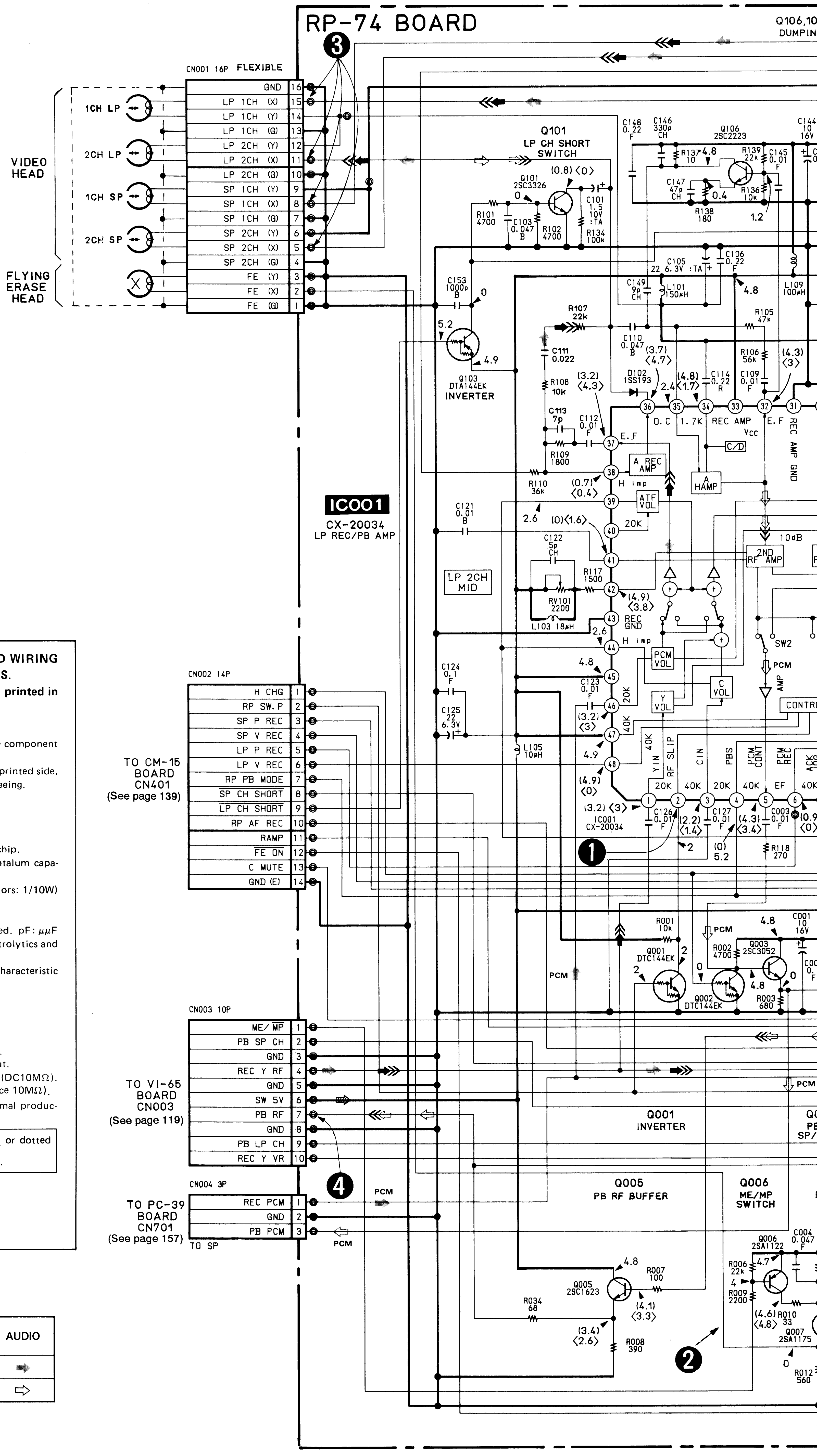
24
25
26
27
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
RP-38
RP-36
RY-16
PR-14
VR-42
YC-64
14 TU VIDEO (Y)
13 TU VIDEO (X)
12 SW 9V
11 PB C (Y)
10 PB C (X)
9 PB Y (Y)
8 PB Y (X)
7 DIG PB C (Y)
6 DIG PB C (X)
5 DIG PB Y (Y)
4 DIG PB Y (X)
3 DIG PB V (Y)
2 DIG PB V (X)
1 N.C.
CN508 BOARD TO BOARD 1.25
CN004 BOARD TO BOARD 1.25
CN001 EL 2.0 I BLK
4 L1 IN Y (X)
3 L1 IN (Y)
2 L1 IN C (X)
1 L1 IN V (X)
18 DIG EE C (Y)
17 DIG EE C (X)
16 DIG EE Y (Y)
15 DIG EE Y (X)
14 DIG EE V (Y)
13 DIG EE V (X)
12 EE ACK
11 INSEL 2
10 INSEL 1
9 SW -5V
8 GND (E)
7 GND
6 SW 5V
5 SW 5V
4 S/V
3 PAL/ SECAM
2 PAL
1 N.C.
CN507 BOARD TO BOARD 1.25
CN003 BOARD TO BOARD 1.25
CN002 EL 2.0 I
4 L2 IN V (X)
3 L2 IN C (X)
2 (VIDEO) L2 IN (Y)
1 L2 IN Y (X)
PC-39
30 CHROMA MUTE
29 HD INSERT
28 DUB AREA
27 RFU AUDIO
26 TU R
25 TU GND
24 TU L
23 SAP AUDIO (MONO)
22 INSEL 2
21 INSEL 1
20 ME/ MP
19 UN 5.6V
18 UN -5V
17 GND (E)
16 TIMER TITLE
15 SW -5V
14 SW 5V
13 AUDIO PB
12 OUT MAIN
11 X2 ON
10 AF BIL
9 AUDIO ATT
8 OUTSEL 4
7 OUTSEL 3
6 OUTSEL 2
5 OUTSEL 1
4 RP PB
3 MARK RAMP
2 MARK RA
1 RP SWP
CN506 BOARD TO BOARD 1.25
CN601 BOARD TO BOARD 1.25
CN605 EL 2.0 I
6 GND
5 L1 IN R
4 L1 IN L
3 GND
2 L OUT R
1 L OUT L
CN606 EL 2.0 I WHT
3 GND
2 21PIN OUT R
1 21PIN OUT L
30 MARK AFREC
29 REC ATF (X)
28 REC ATF (Y)
27 REC AFM (X)
26 RF GND
25 PB RF (X)
24 CROK
23 C SYNC
22 AF REC
21 FERS
20 FERA
19 AFRA
18 PCM REC AREA
17 SP/ LP
16 RF CONT
15 OUT SEL 6 (MUTE2)
14 OUT SEL 5 (MUTE1)
13 SAP/ MONO
12 PCM ACT
11 MARKER CS
10 PCM RAM CS
9 AF ST
8 PB AF ST
7 PB AF BI
6 AREA
5 SYS RESET
4 SCK
3 SI BUS
2 SO BUS
1 INT VD
CN505 BOARD TO BOARD 1.25
CN602 BOARD TO BOARD 1.25
CN701 EL 2.0 I BLK
3 PB PCM
2 GND
1 REC PCM
CN604 EL 2.0 I
1 HP UN -5V
2 HP UN 5V
3 HP GND
4 HP R
5 HP L
CN603 EL 2.0 I
1 AUDIO SW -5V
2 AUDIO SW 5V
3 LINE 2 R
4 LINE 2 GND
5 LINE 2 L
6 MIC (Y)
7 MIC (X)
8 LEVEL GND
9 LEVEL R IN
10 LEVEL R OUT
11 LEVEL L IN
12 LEVEL L OUT
PF-32
PF-31
YF-5
VI-65
22 PB C (Y)
21 PB C (X)
20 PB Y (Y)
19 PB Y (X)
18 REC C (Y)
17 REC C (X)
16 REC Y (Y)
15 REC Y (X)
14 HD
13 GND (E)
12 SW 5V
11 SW 5V
10 PAL/ SECAM
9 YD
8 AFM STEREO
7 NC
6 NC
5 NC
4 NC
3 CHROMA MUTE
2 UN 5.6V
1 UN 5.6V
CN504 BOARD TO BOARD 1.25
CN002 BOARD TO BOARD 1.25
CN003 EL 2.0 I
10 REC Y VR
9 PB LP CH
8 GND
7 PB RF
6 SW 5V
5 GND
4 REC Y RF
3 GND
2 PB SP CH
1 ME/ MP
CN503 EL 2.0 L
1 AD 2
2 TEST KEY 2
3 GND (E)
4 TEST KEY 1
(TEST PIN)
26 N.C.
25 HCHG
24 HI BAND
23 MPHG/ MP
22 HI/ NOR
21 EDIT
20 SHARPNESS
19 VIDEO PB
18 HD INSERT
17 DUB AREA
16 ME/ MP
15 GND (E)
14 PAL V
13 JOG VD
12 JOG
11 VI SWP
10 PB SP CH
9 H CHG RF
8 REC ATF (X)
7 REC ATF (Y)
6 REC AFM (X)
5 REC AFM (Y)
4 PB RF (X)
3 PB RF (Y)
2 C SYNC
1 SP/ LP
CN502 BOARD TO BOARD 1.25
CN001 BOARD TO BOARD 1.25
CN501 EL 2.0 L BLK
1 (ER) T3
2 (ER) SCK
3 RF CONT
4 (ER) AREA
5 DIGITAL GND (E)
(TEST PIN)
PS-196
CN001 EL 2.5 L
GND (E) 12
GND (E) 11
SW -5V 10
UN -5V 9
SW 5V 8
SW 5V 7
UN 5.6V 6
GND (M) 5
UN 9V 4
SW 9V 3
SW 12V 2
UN 40V 1
CN002 EL 2.0 L
POWER CONT 5
UN -30V 4
GND (E) 3
HEATER 5.7V (+) 2
HEATER 5.7V (-) 1
DP-24
DC-15
CN105 FFC 1.0 L
3PIN LINCS VDD
3PIN LINCS
3PIN LINCS
GND (E)
HP L
HP R
HP GND
MIC (X)
MIC (Y)
AUDIO SW5V
AUDIO SW-5V
11 10 9 8 7 6 5 4 3 2 1
CN601 FFC 1.0 I
AUDIO SW-5V
AUDIO SW5V
MIC (Y)
MIC (X)
HP GND
HP R
HP L
GND (E)
3PIN LINCS
3PIN LINCS
3PIN LINCS VDD
1 2 3 4 5 6 7 8 9 10 11
MC-37
EL 2.5 L
1 2 3 4 5
GND (E)
SHUTTLE AD
ANALOG VCC
FR-41
5 6 7 8 9 10 11 12
IN 2.0 L
1 2 3 4 5
W102 BOARD IN 2.0 L
1 2 3 4
W103 BOARD IN 2.0 L
W107 BOARD IN 2.0 L
7 6 5 4 3 2 1
PF-30
13 14 15 16 17 18
SELF LED
LANC LED
AUDIO L
AUDIO R
REMOCON MODE
GND (E)
FF-78
W108 2.0 L
V
VIDEO (Y)
AUDIO SW-5V
AUDIO SW5V
LINE 2 L
LINE 2 GND
LINE 2 R
7 6 5 4 3 2 1
FJ-2
1 2 3 4 5
W001 BOARD IN 2.0 I

## RP-74 (REC/PB AMP) SCHEMATIC DIAGRAM

– Ref. No.: RP-74 Board; 1,000 series –


RP-74 BOARD
Q106,10
DUMPIN
③
CN001 16P FLEXIBLE
GND 16
LP 1CH (X) 15
LP 1CH (Y) 14
LP 1CH (G) 13
LP 2CH (Y) 12
LP 2CH (X) 11
LP 2CH (G) 10
SP 1CH (Y) 9
SP 1CH (X) 8
SP 1CH (G) 7
SP 2CH (Y) 6
SP 2CH (X) 5
SP 2CH (G) 4
FE (Y) 3
FE (X) 2
FE (G) 1
1CH LP
2CH LP
1CH SP
2CH SP
VIDEO HEAD
FLYING ERASE HEAD
Q101
LP CH SHORT SWITCH
Q101 2SC3326
Q106 2SC2223
Q103 DTA144EK
INVERTER
IC001
CX-20034
LP REC/PB AMP
LP 2CH MID
A REC AMP
ATF VOL
A HAMP
REC AMP
2ND RF AMP
PCM VOL
Y VOL
C VOL
SW2
PCM AMP
CONTRO
REC GND
O. C
1. 7K
E. F
H imp
REC AMP GND
10dB
YIN
RF SLIP
CIN
PBS
PCM CONT
PCM REC
IC001 CX-20034
①
CN002 14P
H CHG 1
RP SW. P 2
SP P REC 3
SP V REC 4
LP P REC 5
LP V REC 6
RP PB MODE 7
SP CH SHORT 8
LP CH SHORT 9
RP AF REC 10
RAMP 11
FE ON 12
C MUTE 13
GND (E) 14
TO CM-15 BOARD CN401 (See page 139)
Q001 DTC144EK
Q002 DTC144EK
Q003 2SC3052
PCM
CN003 10P
ME/MP 1
PB SP CH 2
GND 3
REC Y RF 4
GND 5
SW 5V 6
PB RF 7
GND 8
PB LP CH 9
REC Y VR 10
TO VI-65 BOARD CN003 (See page 119)
Q001
INVERTER
CN004 3P
REC PCM 1
GND 2
PB PCM 3
TO PC-39 BOARD CN701 (See page 157)
TO SP
④
Q005
PB RF BUFFER
Q005 2SC1623
Q006
ME/MP SWITCH
Q006 2SA1122
Q007 2SA1175
②

**THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.**
**(In addition to this, the necessary note is printed in each block.)**

**For printed wiring boards:**
- ○— : indicates a lead wire mounted on the component side.
- ●— : indicates a lead wire mounted on the printed side.
- ▒ : Pattern from the side which enables seeing.
- ░ : Pattern of the rear side.

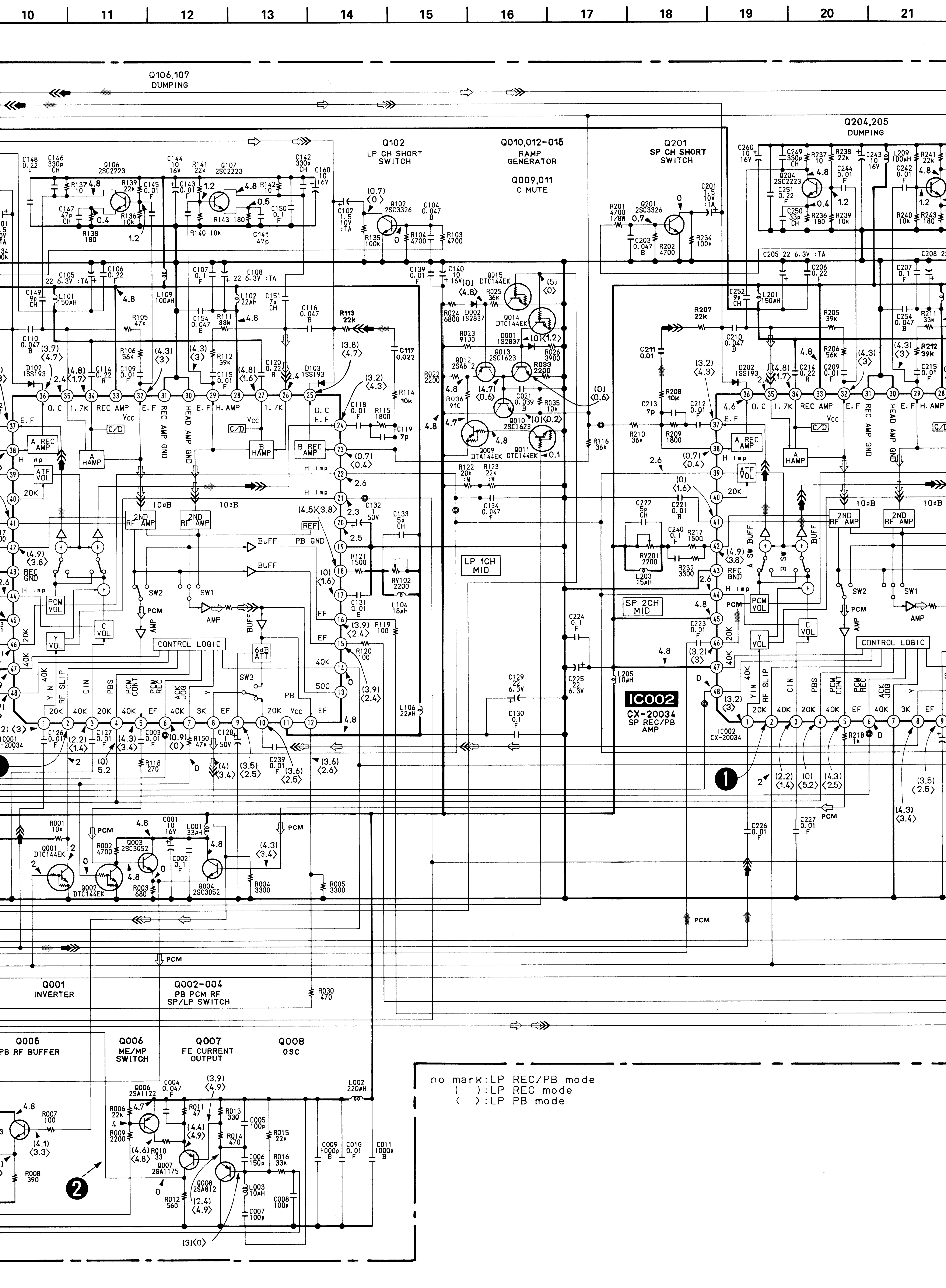
**For schematic diagram:**
- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, because it is damaged by the heat.
- All resistors are in ohms, 1/4W (Chip resistors: 1/10W) unless otherwise noted.
  kΩ: 1000Ω, MΩ: 1000kΩ.
- All capacitors are in μF unless otherwise noted. pF: μμF 50V or less are not indicated except for electrolytics and tantalums.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : nonflammable resistor.
- : fusible resistor.
- ▭ : panel designation.
- △ : internal component.
- Voltages are dc between measurement points.
- Readings are taken with a color-bar signal input.
- Readings are taken with a digital multimeter (DC10MΩ). Voltage are taken with aVOM (Input impedance 10MΩ).
- Voltage variations may be noted due to normal production tolerances.

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

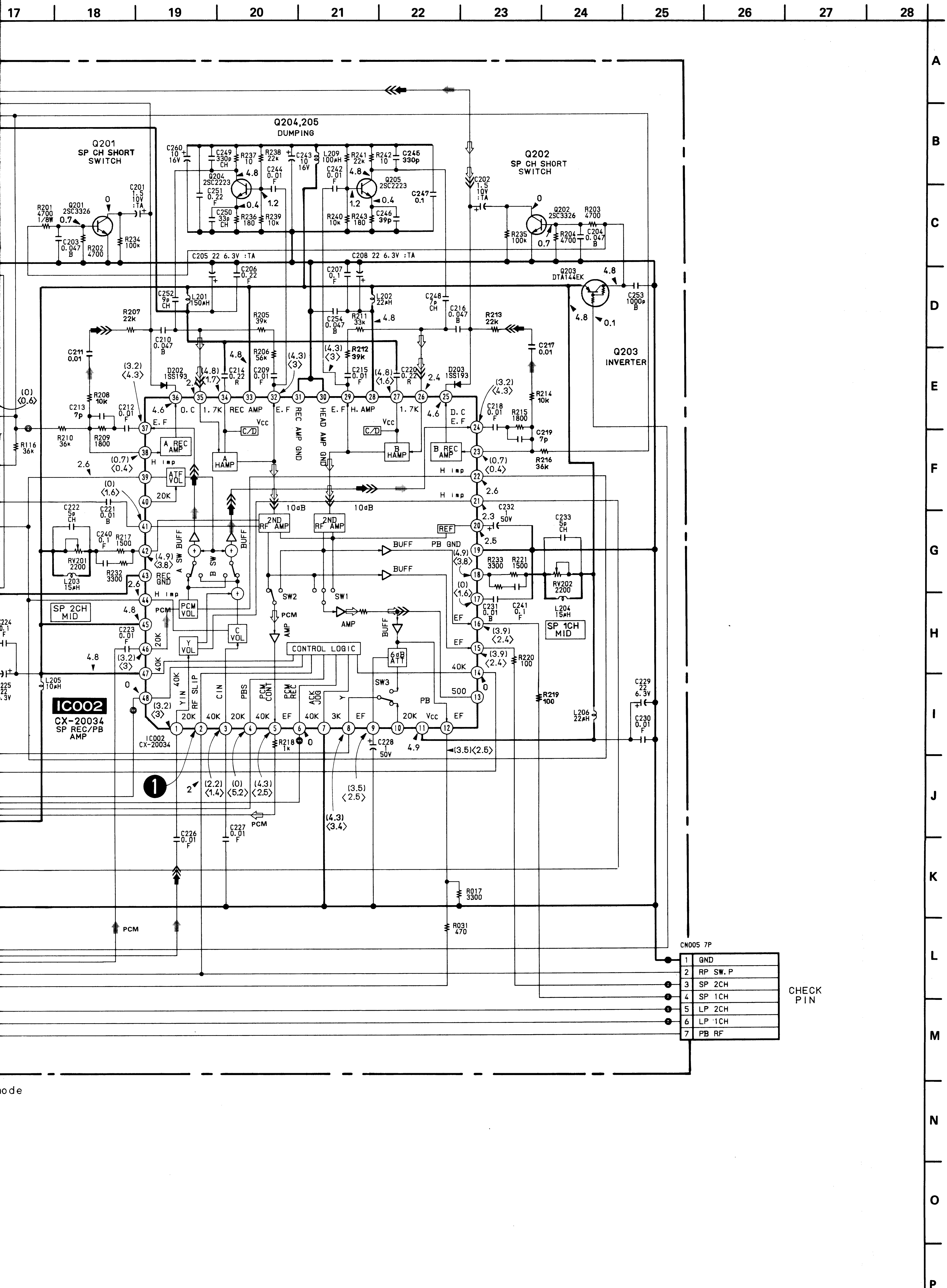
When indicating parts by reference number, please include the board name.

| | VIDEO SIGNAL | | | AUDIO |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| REC | | | ➡» | ➡ |
| PB | | | ⇨» | ⇨ |

HEAD AMP HEAD AMP


10
11
12
13
14
15
16
17
18
19
20
21
Q106,107
DUMPING
Q102
LP CH SHORT SWITCH
Q010,012-015
RAMP GENERATOR
Q009,011
C MUTE
Q201
SP CH SHORT SWITCH
Q204,205
DUMPING
Q106 2SC2223
Q107 2SC2223
Q102 2SC3326
Q201 2SC3326
Q204 2SC2223
Q015 DTC144EK
Q014 DTC144EK
Q013 2SC1623
Q012 2SA812
Q010 2SC1623
Q009 DTA144EK
Q011 DTC144EK
D001 1S2837
D002 1S2837
D102 1SS193
D103 1SS193
D202 1SS193
REC AMP
HEAD AMP GND
REC AMP GND
H. AMP
E. F
O. C
A REC AMP
B REC AMP
A HAMP
B HAMP
ATF VOL
2ND RF AMP
10dB
BUFF
PB GND
REF
SW1
SW2
SW3
PCM
AMP
PCM VOL
Y VOL
C VOL
CONTROL LOGIC
6dB ATT
Y IN
RF SLIP
C IN
PBS
PCM CONT
PCM REC
ACK JOG
H imp
Vcc
C/D
LP 1CH MID
SP 2CH MID
IC002
CX-20034
SP REC/PB AMP
IC001 CX-20034
IC002 CX-20034
Q001 DTC144EK
Q002 DTC144EK
Q003 2SC3052
Q004 2SC3052
Q001
INVERTER
Q002-004
PB PCM RF
SP/LP SWITCH
Q005
PB RF BUFFER
Q006
ME/MP SWITCH
Q007
FE CURRENT OUTPUT
Q008
OSC
Q006 2SA1122
Q007 2SA1175
Q008 2SA812
❶
❷

no mark : LP REC/PB mode
( ) : LP REC mode
〈 〉 : LP PB mode


17
18
19
20
21
22
23
24
25
26
27
28
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
Q204,205
DUMPING
Q201
SP CH SHORT
SWITCH
Q202
SP CH SHORT
SWITCH
Q203
INVERTER
Q203
DTA144EK
Q204
2SC2223
Q205
2SC2223
Q201
2SC3326
Q202
2SC3326
C205 22 6.3V :TA
C208 22 6.3V :TA
D202
1SS193
D203
1SS193
REC AMP
REC AMP GND
HEAD AMP GND
H. AMP
A REC AMP
B REC AMP
A HAMP
B HAMP
ATF VOL
2ND RF AMP
REF
BUFF
PB GND
SW1
SW2
SW3
PCM
AMP
CONTROL LOGIC
6dB ATT
PCM VOL
Y VOL
C VOL
SP 2CH MID
SP 1CH MID
IC002
CX-20034
SP REC/PB
AMP
IC002
CX-20034
YIN
RF SLIP
CIN
PBS
PCM CONT
PCM REC
ACK JOG
H imp
REC GND
A SW BUFF
B SW
BUFF
E.F
O.C
D.C
Vcc
C/D
10dB
RV201
2200
RV202
2200
L203
15μH
L204
15μH
L205
10μH
L206
22μH
R017
3300
R031
470
CN005 7P
1 GND
2 RP SW.P
3 SP 2CH
4 SP 1CH
5 LP 2CH
6 LP 1CH
7 PB RF
CHECK
PIN
❶
ode

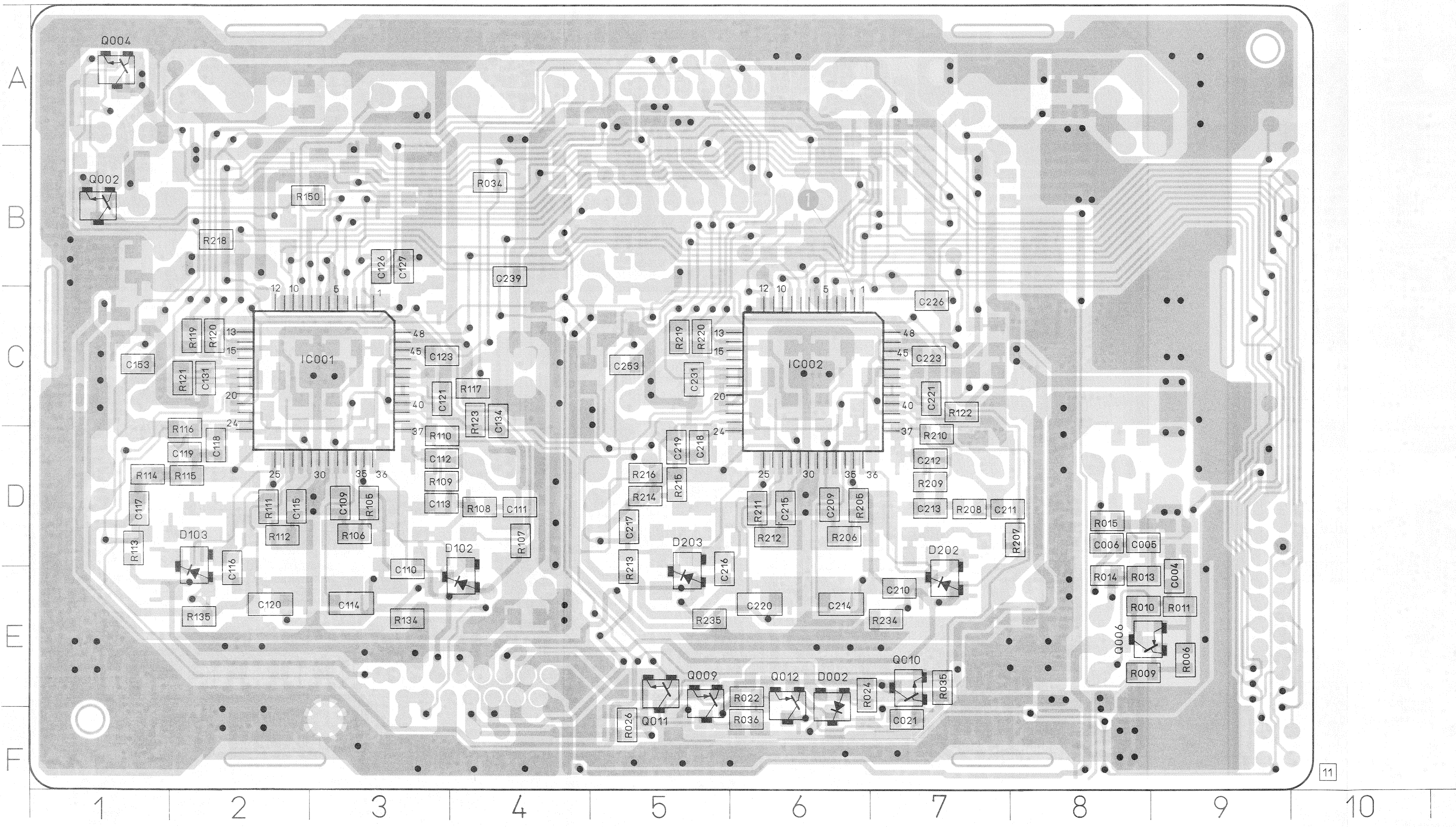
HEAD AMP HEAD AMP

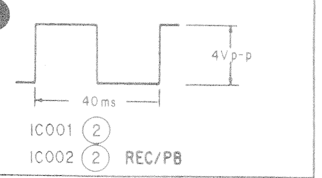
## RP-74 (REC/PB AMP) PRINTED WIRING BOARD

– Ref. No.: RP-74 Board; 1,000 series –

| RP-74 BOARD | |
|---|---|
| D001 | F-16 |
| D002 | E-6 |
| D102 | E-4 |
| D103 | D-2 |
| D202 | E-7 |
| D203 | D-5 |
| IC001 | C-3 |
| IC002 | C-6 |
| Q001 | B-17 |
| Q002 | B-1 |
| Q003 | B-19 |
| Q004 | A-1 |
| Q005 | B-18 |
| Q006 | E-8 |
| Q007 | E-12 |
| Q008 | D-12 |
| Q009 | E-5 |
| Q010 | E-7 |
| Q011 | E-5 |
| Q012 | E-6 |
| Q013 | F-15 |
| Q014 | F-15 |
| Q015 | F-14 |
| Q101 | D-17 |
| Q102 | D-19 |
| Q103 | C-19 |
| Q106 | C-18 |
| Q107 | C-18 |
| Q201 | D-14 |
| Q202 | D-15 |
| Q203 | C-16 |
| Q204 | C-14 |
| Q205 | C-15 |

RP-74 BOARD (COMPONENT SIDE)


A
B
C
D
E
F
Q004
Q002
R150
R034
R218
C126
C127
C239
C226
12
10
5
1
13
15
20
24
25
30
35
36
37
40
45
48
IC001
IC002
R119
R120
C153
R121
C131
C123
R117
C121
R123
C134
R110
C112
R109
C113
R108
C111
R107
R116
C118
C119
R114
R115
C117
R111
C115
C109
R105
R112
R106
R113
D103
C116
D102
C110
C120
C114
R135
R134
R219
R220
C253
C231
C223
C221
R122
R210
C219
C218
C212
R216
R215
R214
R209
R211
C215
C209
R205
C213
R208
C211
C217
R212
R206
R207
R213
D203
C216
D202
C210
C220
C214
R235
R234
R015
C006
C005
R014
R013
C004
R010
R011
Q006
R006
R009
Q010
Q009
Q012
D002
R022
R036
R024
R035
C021
R026
Q011
11
1
2
3
4
5
6
7
8
9
10

❶


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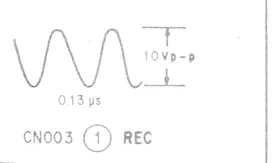

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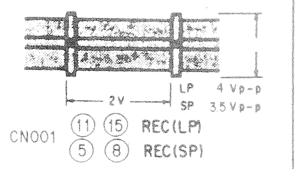

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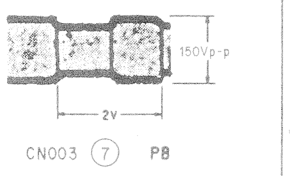
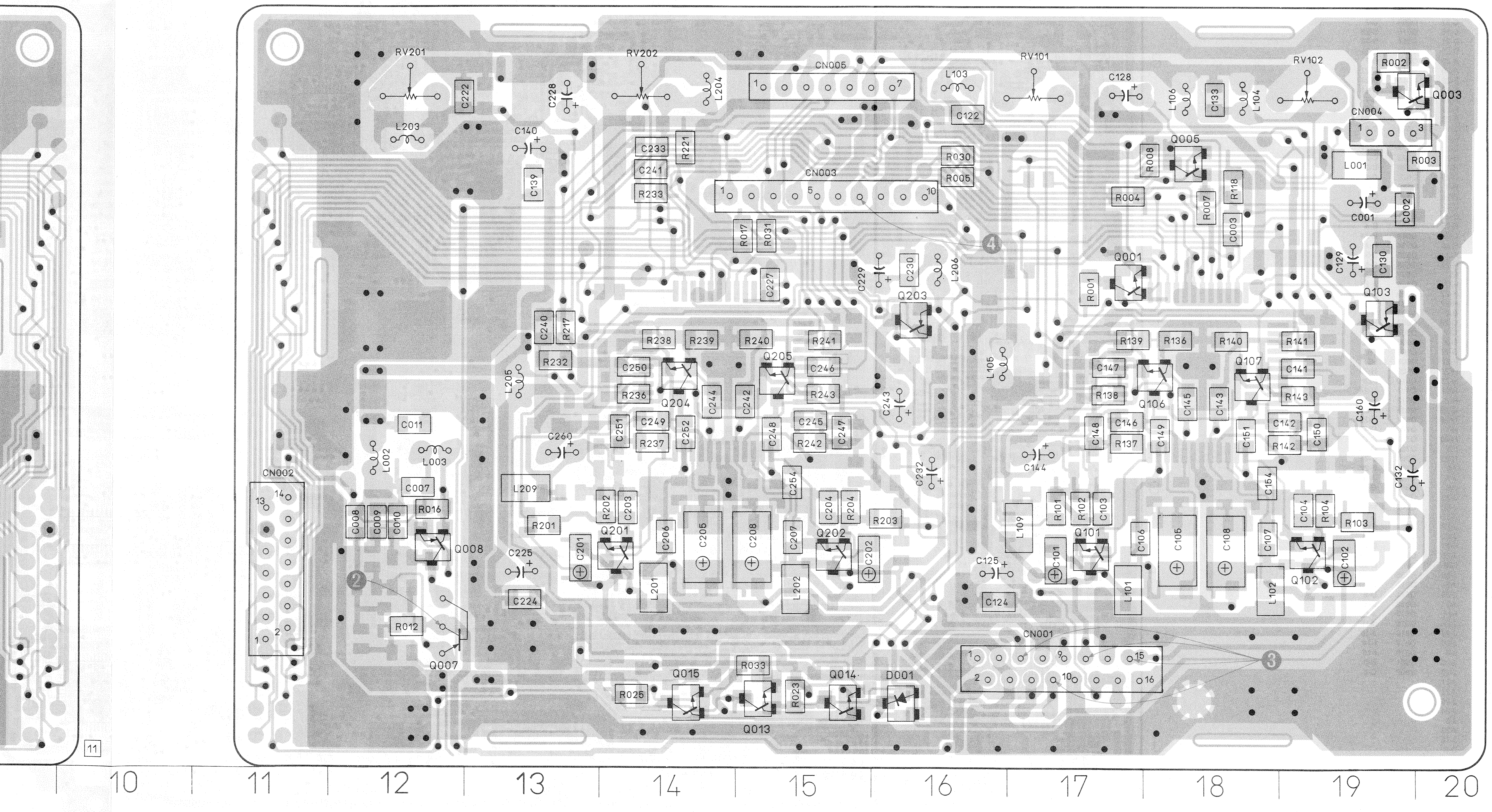


RP-74 BOARD (CONDUCTOR SIDE)

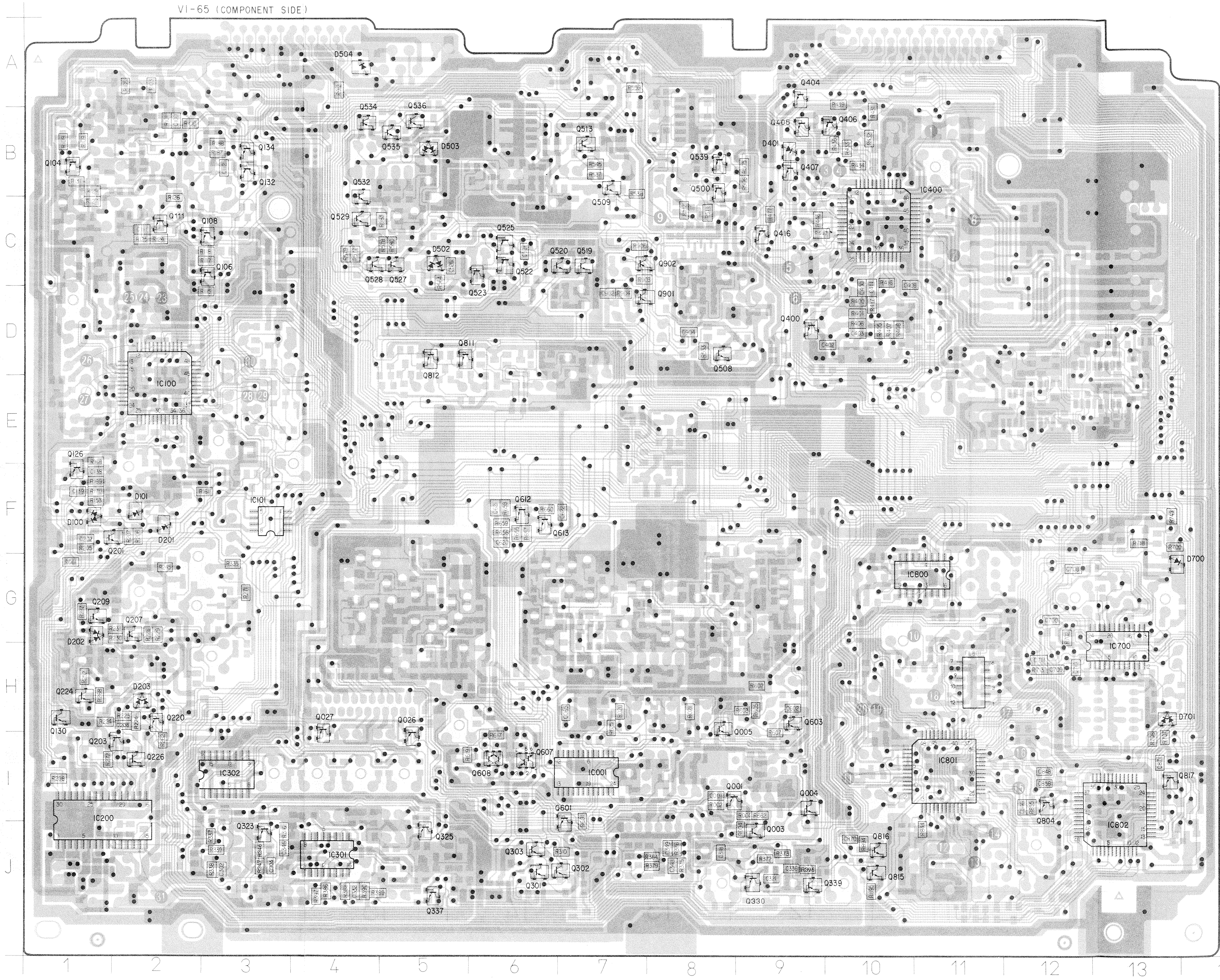

RV201
C222
L203
RV202
C228
L204
C140
C139
CN005
1
7
L103
C122
RV101
C128
L106
C133
L104
RV102
R002
Q003
CN004
1
3
C233
R221
C241
R233
CN003
1
5
10
R030
R005
Q005
R008
L001
R003
R004
R007
R118
C001
C002
C003
R017
R031
4
C229
C230
L206
C227
Q001
R001
C129
C130
Q203
Q103
C240
R217
R232
R238
R239
R240
R241
R139
R136
R140
R141
C250
Q205
C246
C147
Q107
C141
L205
R236
Q204
C244
C242
R243
L105
R138
Q106
C145
C143
R143
C243
C160
C011
C251
C249
C252
C248
C245
C247
C146
C148
C149
C151
C142
C150
L002
L003
C260
R237
R242
R137
R142
C144
C232
C132
CN002
13
14
C007
L209
C254
C154
C008
C009
C010
R016
R202
C203
C204
R204
R203
R101
R102
C103
C104
R104
R103
R201
L109
Q008
Q201
C206
C205
C208
C207
Q202
C202
C201
Q101
C106
C105
C108
C107
C102
C101
Q102
C225
C125
L201
L202
L101
L102
2
C224
C124
R012
1
2
Q007
CN001
1
9
15
2
10
16
3
R033
Q015
Q014
D001
R025
R023
Q013
11
10
11
12
13
14
15
16
17
18
19
20

## VI-65 (VIDEO SIGNAL PROCESS) PRINTED WIRING BOARD

– Ref. No.: VI-65 Board; 2,000 series –

PC-65 BOARD

| | |
|---|---|
| D001 | F-22 |
| D002 | G-21 |
| D003 | G-21 |
| D004 | F-20 |
| D005 | I-22 |
| D006 | G-20 |
| D007 | H-24 |
| D008 | G-21 |
| D009 | H-21 |
| D100 | F-1 |
| D101 | F-2 |
| D102 | D-28 |
| D200 | F-27 |
| D201 | F-2 |
| D202 | G-1 |
| D203 | H-2 |
| D300 | J-23 |
| D301 | J-23 |
| D302 | J-24 |
| D303 | A-18 |
| D400 | D-19 |
| D401 | B-9 |
| D402 | A-19 |
| D404 | D-18 |
| D500 | C-20 |
| D501 | C-21 |
| D502 | C-5 |
| D503 | B-5 |
| D504 | A-4 |
| D700 | G-14 |
| D701 | H-14 |
| D702 | G-16 |
| D703 | H-16 |
| D704 | J-17 |
| D800 | I-17 |
| IC001 | I-7 |
| IC002 | H-21 |
| IC003 | H-24 |
| IC100 | E-2 |
| IC101 | F-3 |
| IC200 | I-1 |
| IC301 | J-4 |
| IC302 | I-3 |
| IC400 | C-10 |
| IC500 | B-24 |
| IC700 | H-13 |
| IC800 | G-11 |
| IC801 | I-11 |
| IC802 | J-13 |
| IC900 | A-24 |
| Q001 | I-8 |
| Q002 | J-20 |
| Q003 | J-9 |
| Q004 | I-9 |
| Q005 | H-9 |
| Q006 | I-21 |
| Q007 | H-22 |
| Q008 | H-21 |
| Q009 | H-21 |
| Q011 | I-21 |
| Q012 | I-22 |
| Q014 | G-22 |
| Q015 | G-22 |
| Q016 | G-22 |
| Q017 | G-23 |
| Q018 | F-22 |
| Q019 | H-22 |
| Q020 | G-22 |
| Q021 | H-20 |
| Q022 | G-21 |
| Q023 | G-20 |
| Q024 | G-20 |
| Q025 | G-20 |
| Q026 | H-5 |
| Q027 | H-4 |
| Q029 | H-23 |
| Q030 | G-24 |
| Q031 | G-23 |
| Q032 | G-24 |
| Q033 | G-24 |
| Q034 | G-25 |
| Q035 | G-24 |
| Q036 | F-24 |
| Q038 | G-24 |
| Q039 | G-23 |
| Q040 | G-21 |
| Q100 | B-26 |
| Q101 | A-27 |
| Q102 | A-27 |
| Q103 | A-27 |
| Q104 | B-1 |
| Q106 | C-3 |
| Q107 | C-26 |
| Q108 | C-3 |
| Q109 | B-26 |
| Q110 | B-26 |
| Q111 | C-2 |
| Q112 | B-27 |
| Q113 | B-28 |
| Q114 | C-27 |
| Q116 | C-28 |
| Q117 | D-27 |
| Q118 | D-26 |
| Q119 | A-26 |
| Q120 | A-26 |
| Q121 | E-26 |
| Q122 | E-26 |
| Q123 | F-26 |
| Q124 | F-26 |
| Q125 | F-27 |
| Q126 | E-1 |
| Q127 | F-28 |
| Q128 | E-27 |
| Q129 | E-27 |
| Q130 | H-1 |
| Q131 | D-27 |
| Q132 | B-3 |
| Q133 | B-26 |
| Q134 | B-3 |
| Q135 | B-27 |
| Q136 | B-26 |
| Q140 | C-26 |
| Q200 | F-28 |
| Q201 | F-2 |
| Q202 | H-27 |
| Q203 | I-1 |
| Q204 | I-27 |
| Q205 | H-27 |
| Q206 | H-27 |
| Q207 | G-2 |
| Q208 | G-28 |
| Q209 | G-1 |
| Q210 | G-27 |
| Q211 | G-27 |
| Q212 | F-27 |
| Q213 | H-26 |
| Q214 | H-28 |
| Q215 | H-28 |
| Q220 | H-2 |
| Q221 | G-26 |
| Q222 | G-26 |
| Q224 | H-1 |
| Q225 | H-26 |
| Q226 | I-2 |
| Q227 | H-27 |
| Q301 | J-6 |
| Q302 | J-7 |
| Q303 | J-6 |
| Q313 | J-23 |
| Q314 | J-22 |
| Q315 | J-22 |
| Q316 | J-22 |
| Q317 | J-22 |
| Q318 | F-27 |
| Q319 | J-26 |
| Q321 | I-26 |
| Q322 | J-26 |
| Q323 | J-3 |
| Q324 | J-26 |
| Q325 | J-5 |
| Q326 | I-24 |
| Q327 | J-24 |
| Q328 | J-20 |
| Q329 | J-20 |
| Q330 | J-9 |
| Q331 | J-20 |
| Q332 | J-20 |
| Q333 | J-21 |
| Q334 | J-21 |
| Q335 | J-25 |
| Q336 | J-24 |
| Q337 | J-5 |
| Q338 | J-23 |
| Q339 | J-10 |
| Q400 | D-9 |
| Q401 | D-19 |
| Q402 | D-18 |
| Q404 | A-9 |
| Q405 | B-9 |
| Q406 | B-10 |
| Q407 | B-9 |
| Q416 | C-9 |
| Q417 | D-18 |
| Q500 | B-8 |
| Q501 | B-20 |
| Q502 | C-20 |
| Q503 | C-21 |
| Q504 | D-21 |
| Q505 | D-21 |
| Q506 | D-21 |
| Q507 | C-21 |
| Q508 | D-8 |
| Q509 | C-7 |
| Q510 | B-22 |
| Q511 | B-22 |
| Q512 | B-21 |
| Q513 | B-7 |
| Q514 | C-22 |
| Q515 | B-23 |
| Q518 | A-21 |
| Q519 | C-7 |
| Q520 | C-7 |
| Q521 | C-23 |
| Q522 | C-6 |
| Q523 | D-6 |
| Q524 | C-22 |
| Q525 | C-6 |
| Q526 | C-24 |
| Q527 | C-5 |
| Q528 | C-4 |
| Q529 | C-4 |
| Q530 | C-25 |
| Q531 | C-24 |
| Q532 | B-4 |
| Q533 | B-24 |
| Q534 | B-4 |
| Q535 | B-5 |
| Q536 | B-5 |
| Q537 | A-24 |
| Q538 | A-24 |
| Q539 | B-8 |
| Q601 | I-7 |
| Q602 | H-20 |
| Q603 | H-9 |
| Q604 | H-19 |
| Q605 | I-19 |
| Q607 | I-6 |
| Q608 | I-6 |
| Q609 | H-23 |
| Q610 | I-23 |
| Q611 | H-24 |
| Q612 | F-6 |
| Q613 | F-6 |
| Q614 | H-23 |
| Q700 | G-17 |
| Q701 | F-15 |
| Q702 | G-16 |
| Q704 | E-21 |
| Q705 | E-22 |
| Q706 | J-16 |
| Q800 | G-17 |
| Q801 | G-17 |
| Q802 | I-18 |
| Q803 | J-17 |
| Q804 | I-12 |
| Q805 | I-15 |
| Q806 | D-22 |
| Q807 | D-23 |
| Q808 | D-23 |
| Q809 | D-24 |
| Q810 | D-24 |
| Q811 | D-5 |
| Q812 | D-5 |
| Q813 | J-19 |
| Q815 | J-10 |
| Q816 | J-10 |
| Q817 | I-14 |
| Q818 | I-15 |
| Q901 | D-8 |
| Q902 | C-8 |


VI-65 (COMPONENT SIDE)
A
B
C
D
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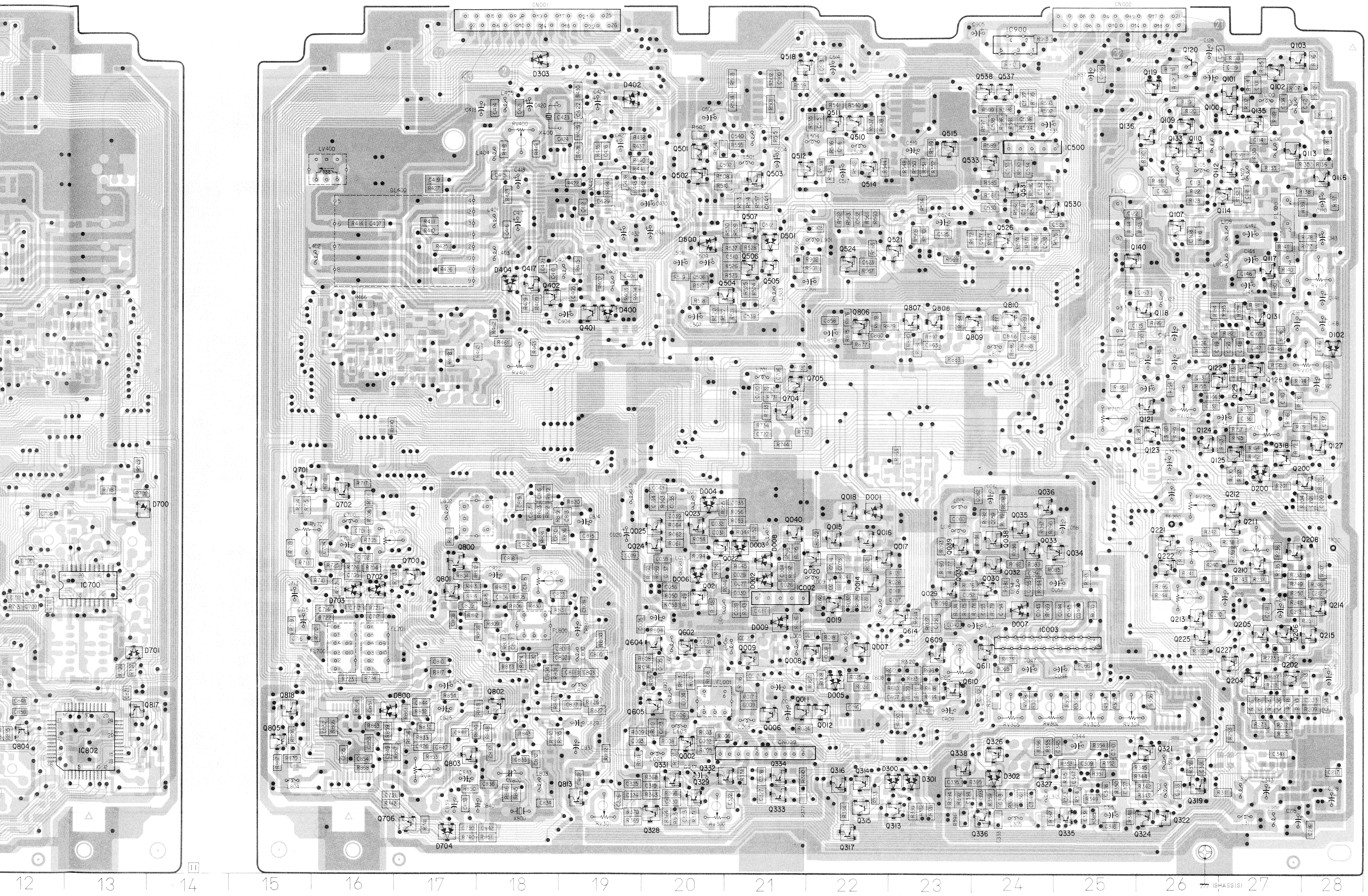
IC100
IC101
IC200
IC301
IC302
IC001
IC400
IC700
IC800
IC801
IC802
D504
D503
D502
D401
D101
D100
D201
D202
D203
D700
D701
Q104
Q134
Q132
Q111
Q108
Q106
Q126
Q201
Q209
Q207
Q224
Q130
Q203
Q226
Q220
Q534
Q536
Q535
Q532
Q529
Q528
Q527
Q525
Q522
Q523
Q513
Q509
Q520
Q519
Q902
Q901
Q539
Q500
Q508
Q404
Q405
Q406
Q407
Q416
Q400
Q811
Q812
Q612
Q613
Q027
Q026
Q608
Q607
Q005
Q603
Q001
Q004
Q003
Q601
Q323
Q325
Q303
Q301
Q302
Q337
Q330
Q339
Q816
Q815
Q804
Q817

VI-65 (CONDUCTOR SIDE)


CN001
CN002
IC900
IC500
IC700
IC802
IC002
IC003
CN003
LV400
D303
D402
D400
D404
D500
D501
D700
D701
D702
D703
D704
D800
D001
D002
D003
D004
D005
D006
D007
D008
D100
D102
D200
D300
D301
D302
X400
X800
RV400
RV401
RV700
RV800
RV801
RV300
RV301
RV302
RV303
RV304
RV305
FL001
FL700
FL701
FL800
FL101
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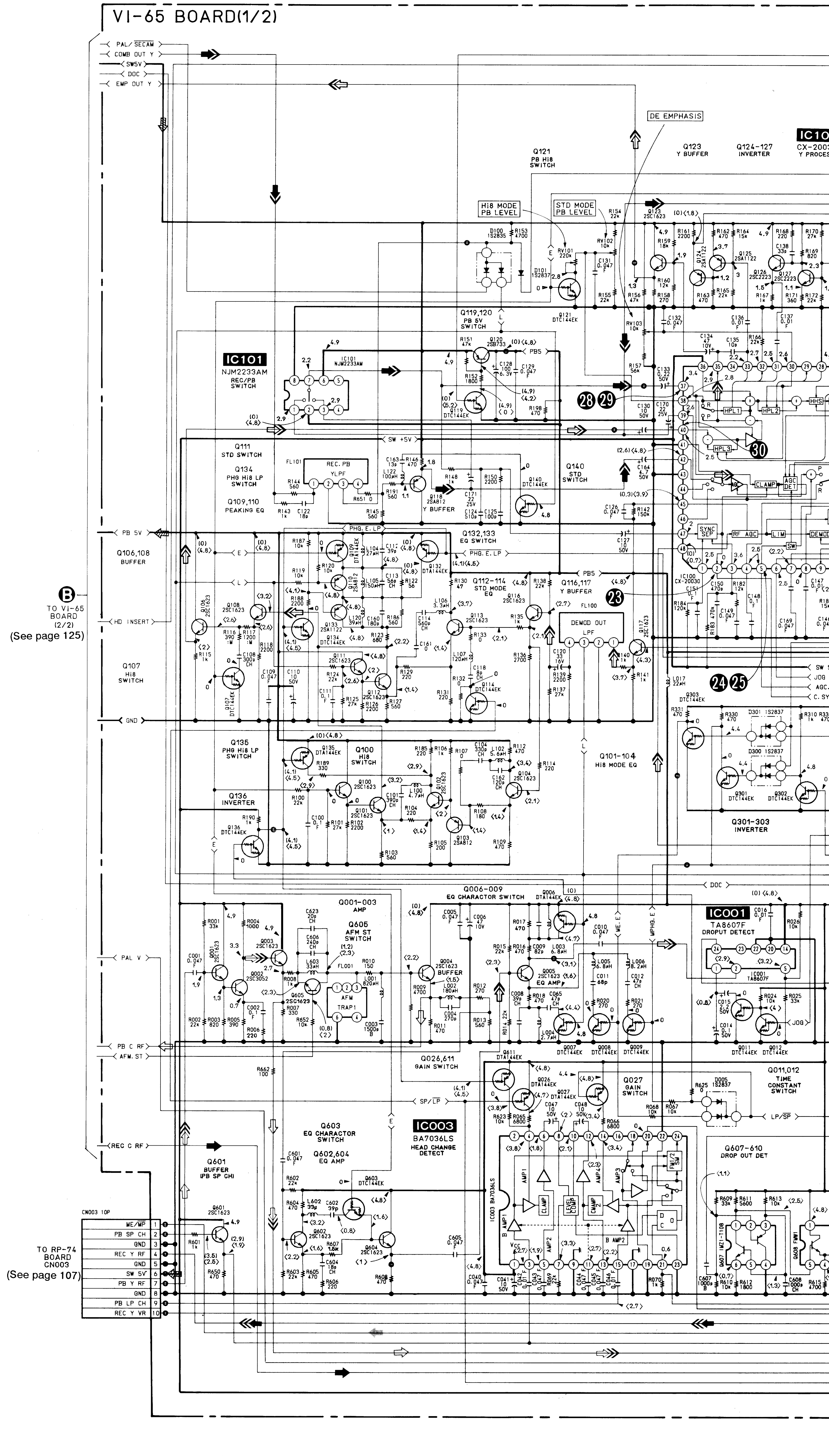
(SHASSIS)

**VIDEO VIDEO**

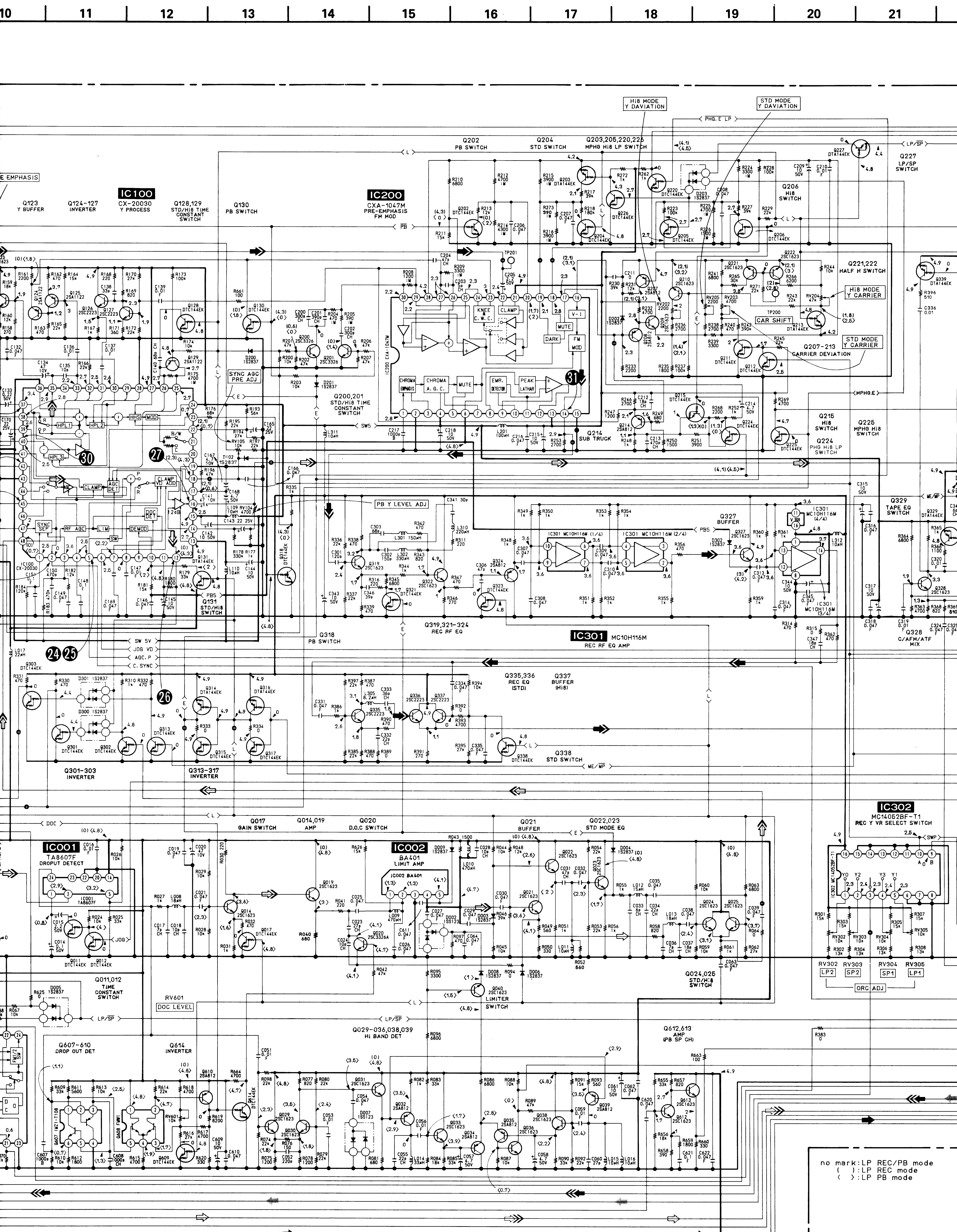
## VI-65 (VIDEO SIGNAL PROCESS) SCHEMATIC DIAGRAMS (1/2)

– Ref. No.: VI-65 Board; 2,000 series –



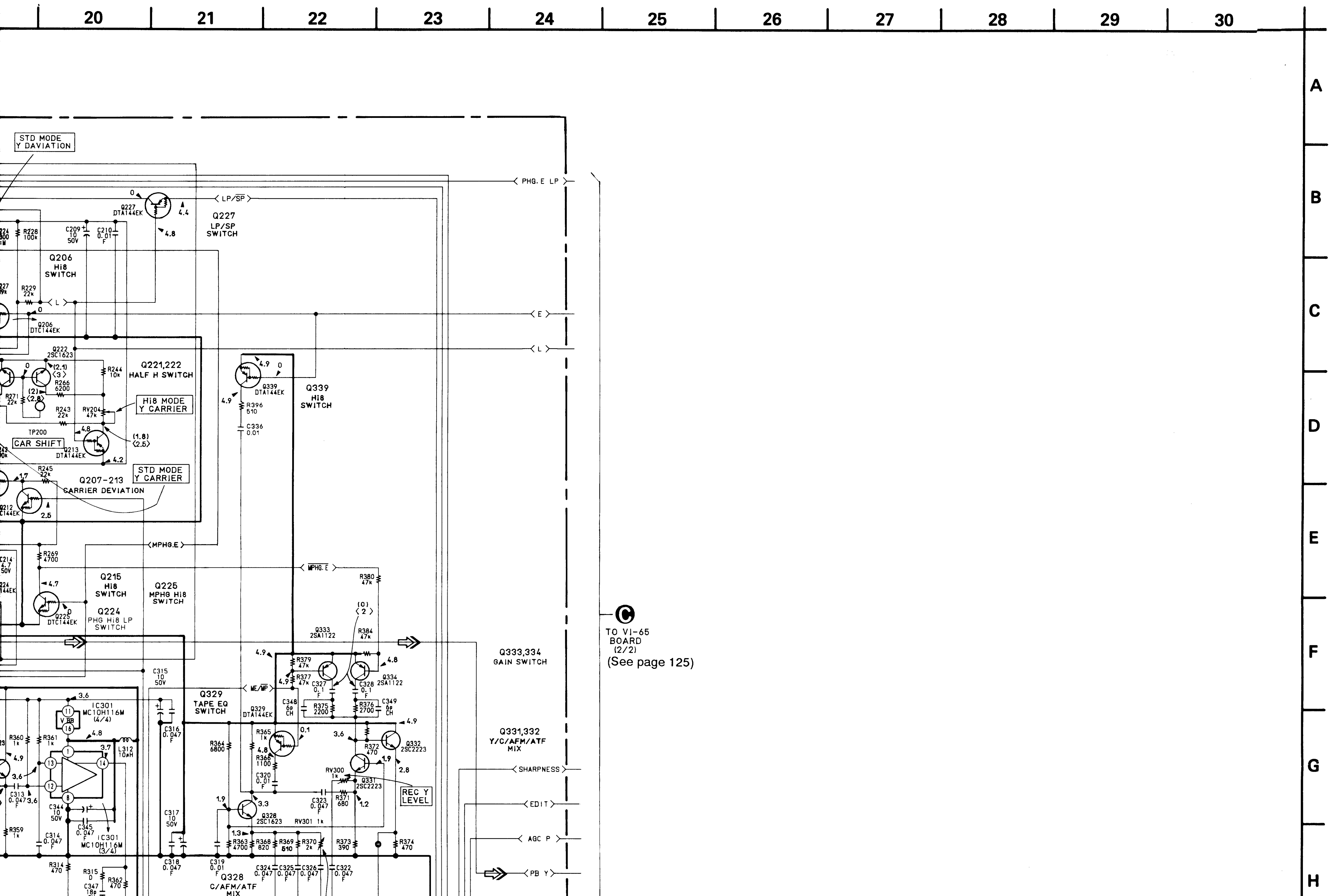
VI-65 BOARD(1/2)
PAL/SECAM
COMB OUT Y
SW5V
DOC
EMP OUT Y
DE EMPHASIS
Q121 PB Hi8 SWITCH
Q123 Y BUFFER
Q124-127 INVERTER
CX-2003 Y PROCES
Hi8 MODE PB LEVEL
STD MODE PB LEVEL
Q119,120 PB 5V SWITCH
IC101 NJM2233AM REC/PB SWITCH
Q111 STD SWITCH
Q134 PHG Hi8 LP SWITCH
Q109,110 PEAKING EQ
REC.PB YLPF
Q118 Y BUFFER
Q140 STD SWITCH
Q106,108 BUFFER
Q132,133 EQ SWITCH
Q112-114 STD MODE EQ
Q116,117 Y BUFFER
DEMOD OUT LPF
Q107 Hi8 SWITCH
B TO VI-65 BOARD (2/2) (See page 125)
PB 5V
HD INSERT
GND
Q135 PHG Hi8 LP SWITCH
Q100 Hi8 SWITCH
Q101-104 Hi8 MODE EQ
Q136 INVERTER
Q301-303 INVERTER
IC100 CX-20030
SYNC SEP
RF AGC
LIM
DEMOD
CLAMP
AGC DET
HPL1
HPL2
HPL3
HHS
Q006-009 EQ CHARACTER SWITCH
Q001-003 AMP
Q605 AFM ST SWITCH
AFM TRAP1
Q004 BUFFER
Q005 EQ AMP
IC001 TA8607F DROPUT DETECT
Q011,012 TIME CONSTANT SWITCH
PAL V
PB C RF
AFM. ST
SP/LP
LP/SP
JOG
DOC
Q026,611 GAIN SWITCH
Q027 GAIN SWITCH
Q603 EQ CHARACTOR SWITCH
Q602,604 EQ AMP
IC003 BA7036LS HEAD CHANGE DETECT
AMP1
AMP2
AMP3
AMP4
CLAMP
LEVEL COMP
B AMP2
FM1/2 SW
Q601 BUFFER (PB SP CH)
Q607-610 DROP OUT DET
REC C RF
CN003 10P
ME/MP 1
PB SP CH 2
GND 3
REC Y RF 4
GND 5
SW 5V 6
PB Y RF 7
GND 8
PB LP CH 9
REC Y VR 10
TO RP-74 BOARD CN003 (See page 107)
23
24 25
28 29
30

VIDEO VIDEO


E EMPHASIS
Q123 Y BUFFER
Q124-127 INVERTER
IC100 CX-20030 Y PROCESS
Q128,129 STD/Hi8 TIME CONSTANT SWITCH
Q130 PB SWITCH
IC200 CXA-1047M PRE-EMPHASIS FM MOD
Q202 PB SWITCH
Q204 STD SWITCH
Q203,205,220,226 MPHG Hi8 LP SWITCH
Hi8 MODE Y DAVIATION
STD MODE Y DAVIATION
Q227 LP/SP SWITCH
Q206 Hi8 SWITCH
Q221,222 HALF H SWITCH
Hi8 MODE Y CARRIER
STD MODE Y CARRIER
CAR SHIFT
Q207-213 CARRIER DEVIATION
SYNC AGC PRE ADJ
Q200,201 STD/Hi8 TIME CONSTANT SWITCH
Q214 SUB TRUCK
Q215 Hi8 SWITCH
Q225 MPHG Hi8 SWITCH
Q224 PHG Hi8 LP SWITCH
Q131 STD/Hi8 SWITCH
PB Y LEVEL ADJ
Q327 BUFFER
Q329 TAPE EQ SWITCH
Q328 C/AFM/ATF MIX
Q318 PB SWITCH
Q319,321-324 REC RF EQ
IC301 MC10H116M REC RF EQ AMP
Q335,336 REC EQ (STD)
Q337 BUFFER (Hi8)
Q338 STD SWITCH
Q301-303 INVERTER
Q313-317 INVERTER
IC302 MC14052BF-T1 REC Y VR SELECT SWITCH
IC001 TA8607F DROPUT DETECT
Q017 GAIN SWITCH
Q014,019 AMP
Q020 D.O.C SWITCH
IC002 BA401 LIMIT AMP
Q021 BUFFER
Q022,023 STD MODE EQ
Q024,025 STD/Hi8 SWITCH
Q040 LIMITER SWITCH
Q011,012 TIME CONSTANT SWITCH
RV601 DOC LEVEL
RV302 LP2 RV303 SP2 RV304 SP1 RV305 LP1
ORC ADJ
Q607-610 DROP OUT DET
Q614 INVERTER
Q029-036,038,039 Hi BAND DET
Q612,613 AMP (PB SP CH)
SW 5V
JOG VD
AGC. P
C. SYNC
24 25 26 27 30 31

no mark:LP REC/PB mode
( ):LP REC mode
〈 〉:LP PB mode

VIDEO V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A
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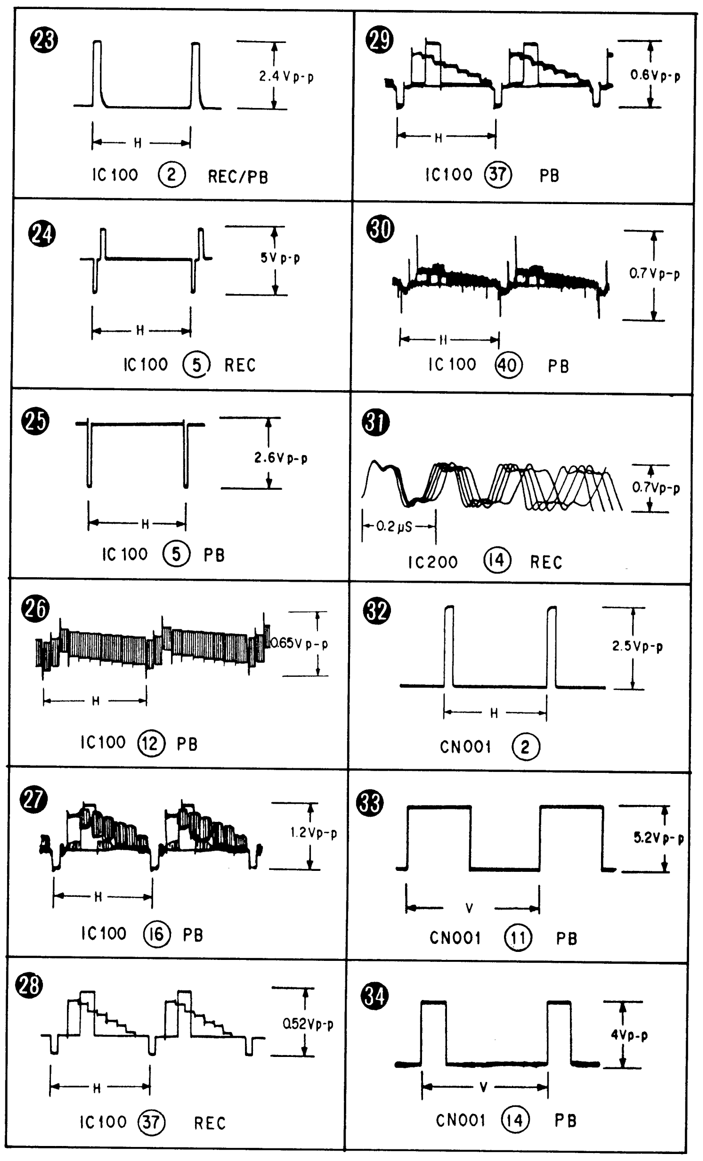
K
L
M
N
O
P
STD MODE Y DAVIATION
Q227 DTA144EK
Q227 LP/SP SWITCH
Q206 Hi8 SWITCH
Q206 DTC144EK
Q222 2SC1623
Q221,222 HALF H SWITCH
Hi8 MODE Y CARRIER
CAR SHIFT
TP200
Q213 DTA144EK
STD MODE Y CARRIER
Q207-213 CARRIER DEVIATION
Q339 DTA144EK
Q339 Hi8 SWITCH
Q215 Hi8 SWITCH
Q225 MPHG Hi8 SWITCH
Q224 PHG Hi8 LP SWITCH
Q333 2SA1122
Q334 2SA1122
Q333,334 GAIN SWITCH
IC301 MC10H116M (4/4)
IC301 MC10H116M (3/4)
Q329 TAPE EQ SWITCH
Q329 DTA144EK
Q331,332 Y/C/AFM/ATF MIX
Q332 2SC2223
Q331 2SC2223
REC Y LEVEL
Q328 2SC1623
Q328 C/AFM/ATF MIX
REC C LEVEL
PHG. E LP
LP/SP
MPHG.E
SHARPNESS
EDIT
AGC P
PB Y
VI SWP
DUB AREA
JOG
ME/MP
C
TO VI-65 BOARD (2/2)
(See page 125)
IC302
MC14052BF-T1
REC Y VR SELECT SWITCH
SWP
SP/LP
RV302 LP2
RV303 SP2
RV304 SP1
RV305 LP1
ORC ADJ
CN001 26P
26 N.C.
25 HCHG
24 HI-BAND
23 MPHG/MP
22 HI/NOR
21 EDIT
20 SHARPNESS
19 VIDEO PB
18 HD INSERT
17 DUB AREA
16 ME/MP
15 GND (E)
14 PAL V
13 JOG VD
12 JOG
11 VI SWP
10 PB SP CH
9 HCHR
8 REC ATF (X)
7 REC ATF (Y)
6 REC AFM (X)
5 REC AFM (Y)
4 PB RF (X)
3 PB RF (Y)
2 C. SYNC
1 SP/LP
D303 1S2837
TO IN-24 BOARD (CN502)
(See page 185)
HD
C. SYNC
JOG VD
SP/LP
D
TO VI-65 BOARD (2/2)
(See page 125)
R383 0

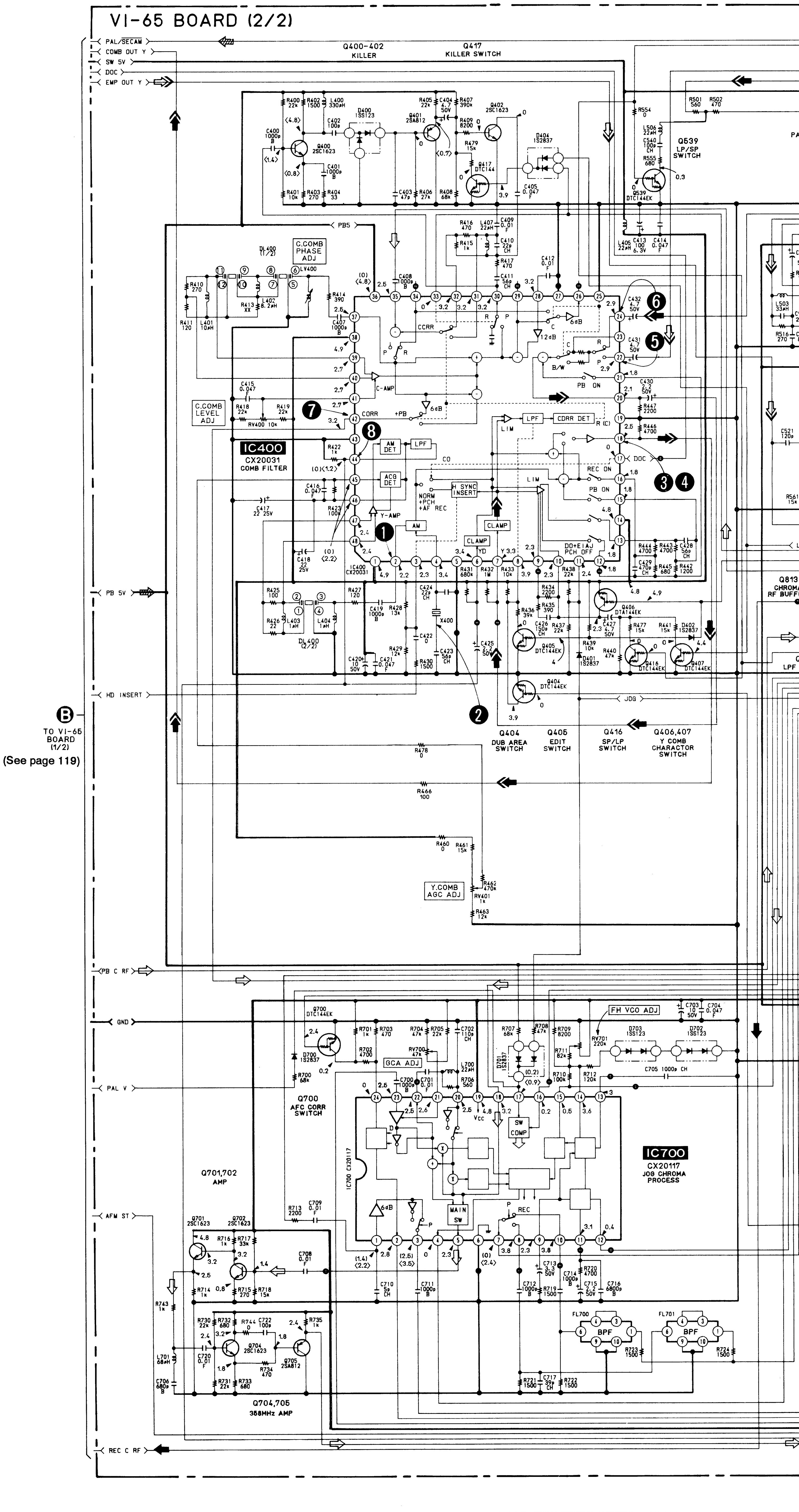
no mark:LP REC/PB mode
( ):LP REC mode
< >:LP PB mode

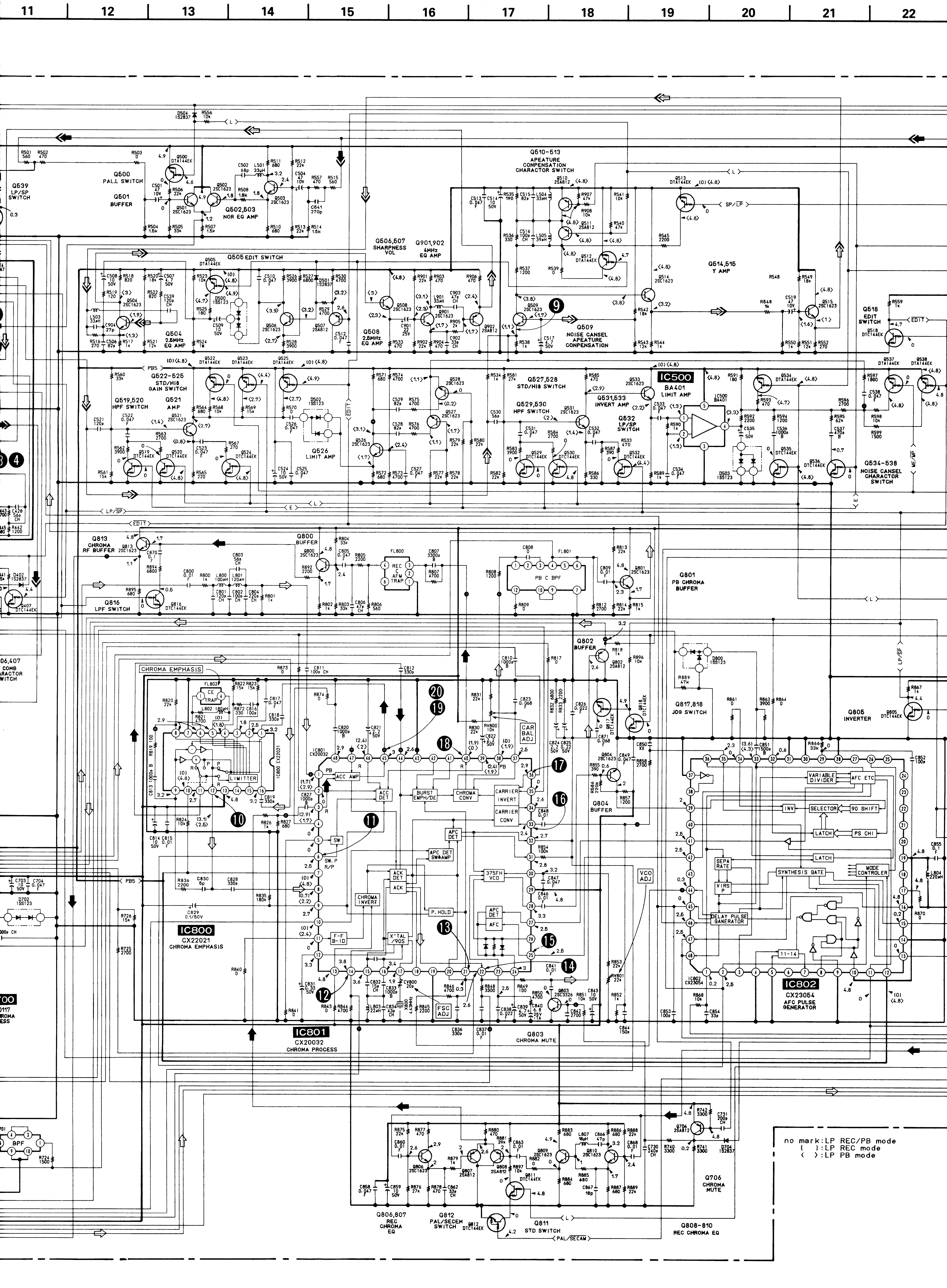


| | VIDEO SIGNAL | | | AUDIO |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| REC | ➡ | ➡≫ | ➡⋙ | ➡ |
| PB | ⇨ | ⇨≫ | ⇨⋙ | ⇨ |

## VI-65 (VIDEO SIGNAL PROCESS) SCHEMATIC DIAGRAMS (2/2)

– Ref. No.: VI-65 Board; 2,000 series –


VI-65 BOARD (2/2)
PAL/SECAM
COMB OUT Y
SW 5V
DOC
EMP OUT Y
Q400-402 KILLER
Q417 KILLER SWITCH
Q539 LP/SP SWITCH
PB5
C.COMB PHASE ADJ
C.COMB LEVEL ADJ
IC400 CX20031 COMB FILTER
PB 5V
HD INSERT
B TO VI-65 BOARD (1/2)
(See page 119)
Q404 DUB AREA SWITCH
Q405 EDIT SWITCH
Q416 SP/LP SWITCH
Q406,407 Y COMB CHARACTOR SWITCH
JOG
Y.COMB AGC ADJ
PB C RF
GND
PAL V
AFM ST
REC C RF
Q700 AFC CORR SWITCH
GCA ADJ
FH VCO ADJ
IC700 CX20117 JOG CHROMA PROCESS
Q701,702 AMP
Q704,705 358MHz AMP
FL700 BPF
FL701 BPF
Q813 CHROMA RF BUFFER



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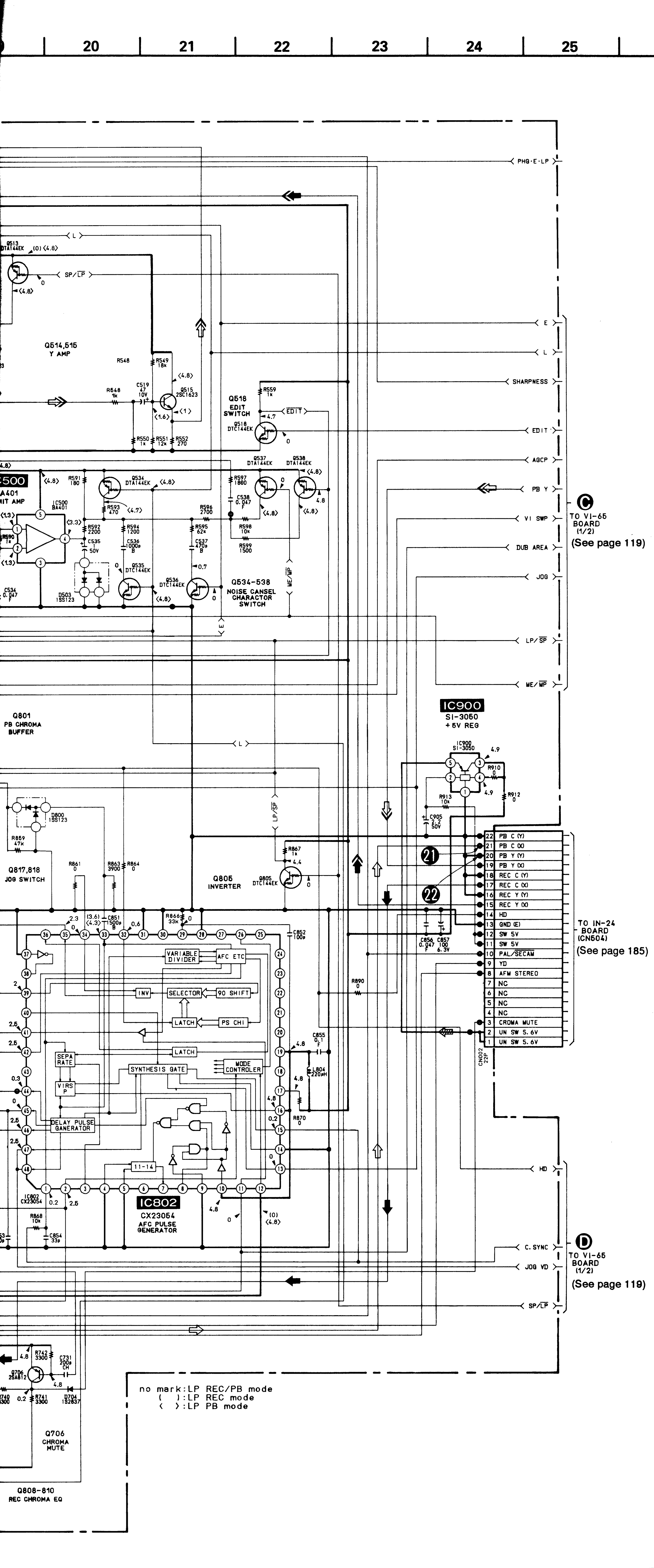
22
Q539 LP/SP SWITCH
Q500 PAL.L SWITCH
Q501 BUFFER
Q502,503 NOR EQ AMP
Q510-513 APEATURE CONPENSATION CHARACTOR SWITCH
Q506,507 SHARPNESS VOL
Q901,902 4MHz EQ AMP
Q505 EDIT SWITCH
Q514,515 Y AMP
Q504 2.5MHz EQ AMP
Q508 2.5MHz EQ AMP
Q509 NOISE CANSEL APEATURE CONPENSATION
Q518 EDIT SWITCH
Q522-525 STD/HI8 GAIN SWITCH
Q519,520 HPF SWITCH
Q521 AMP
Q526 LIMIT AMP
Q527,528 STD/HI8 SWITCH
Q529,530 HPF SWITCH
Q531,533 INVERT AMP
Q532 LP/SP SWITCH
IC500 BA401 LIMIT AMP
Q534-538 NOISE CANSEL CHARACTOR SWITCH
Q813 CHROMA RF BUFFER
Q800 BUFFER
Q816 LPF SWITCH
FL800 REC C AFM TRAP
FL801 PB C BPF
Q801 PB CHROMA BUFFER
Q802 BUFFER
Q817,818 JOG SWITCH
Q805 INVERTER
Q804 BUFFER
CHROMA EMPHASIS
FL802 CE TRAP
LIMITTER
IC800 CX22021 CHROMA EMPHASIS
IC801 CX20032 CHROMA PROCESS
ACC AMP
ACC DET
BURST EMPH/DE
CHROMA CONV
CARRIER INVERT
CARRIER CONV
APC DET
APC DET SW&AMP
ACK DET
ACK
375FH VCO
CHROMA INVERT
P. HOLD
APC DET
AFC
F-F B-ID
X'TAL /90S
FSC ADJ
CAR BAL ADJ
VCO ADJ
SW
SW. P R/P
IC802 CX23054 AFC PULSE GENERATOR
VARIABLE DIVIDER
AFC ETC
INV
SELECTOR
90 SHIFT
LATCH
PS CHI
SEPA RATE
VIRS P
SYNTHESIS GATE
MODE CONTROLER
DELAY PULSE GANERATOR
11-14
Q803 CHROMA MUTE
Q806,807 REC CHROMA EQ
Q812 PAL/SECEM SWITCH
Q811 STD SWITCH
Q808-810 REC CHROMA EQ
Q706 CHROMA MUTE
BPF
EDIT
LP/SP
PB5
PAL/SECAM
ME/NP
SP/LP
00117 CHROMA PROCESS
406,407 COMB CHARACTOR SWITCH

no mark: LP REC/PB mode
( ): LP REC mode
〈 〉: LP PB mode

VIDEO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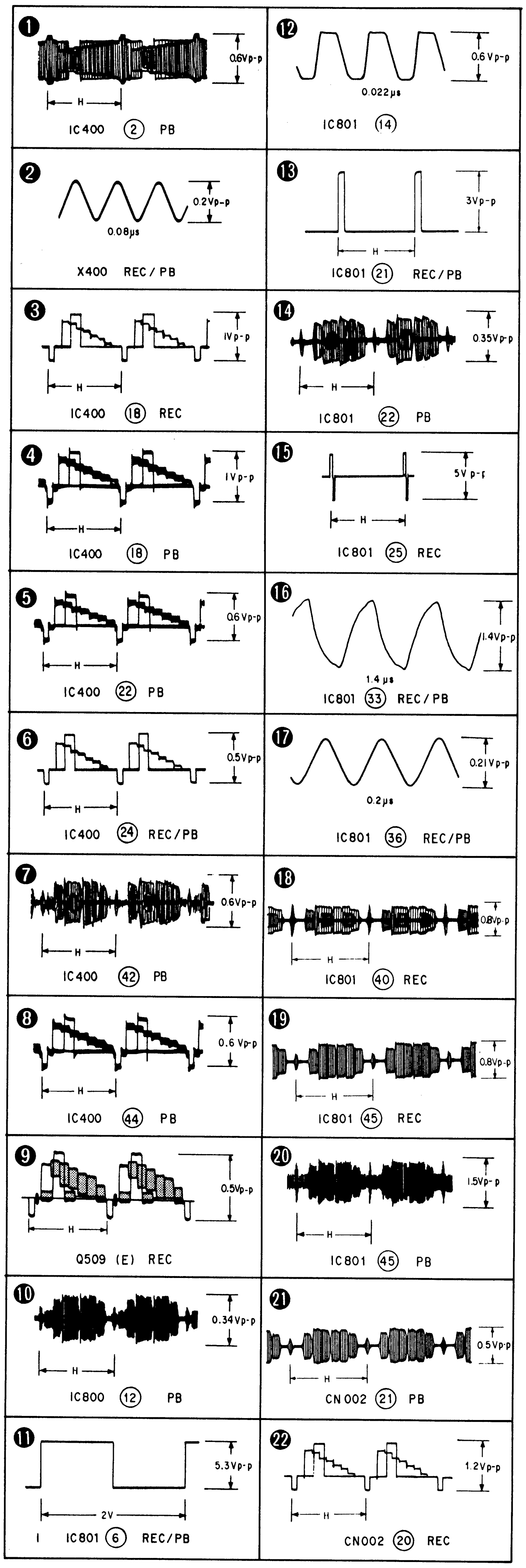
29
30
PHG·E·LP
L
SP/LP
Q513 DTA144EK
Q514,515 Y AMP
Q515 2SC1623
E
L
SHARPNESS
Q518 EDIT SWITCH
EDIT
AGCP
PB Y
VI SWP
DUB AREA
JOG
LP/SP
ME/MP
IC500 BA401 LIMIT AMP
Q534-538 NOISE CANSEL CHARACTOR SWITCH
D503 1SS123
C
TO VI-65 BOARD (1/2)
(See page 119)
Q801 PB CHROMA BUFFER
IC900 SI-3050 +5V REG
D800 1SS123
Q817,818 JOG SWITCH
Q805 INVERTER
22 PB C (Y)
21 PB C (X)
20 PB Y (Y)
19 PB Y (X)
18 REC C (Y)
17 REC C (X)
16 REC Y (Y)
15 REC Y (X)
14 HD
13 GND (E)
12 SW 5V
11 SW 5V
10 PAL/SECAM
9 YD
8 AFM STEREO
7 NC
6 NC
5 NC
4 NC
3 CROMA MUTE
2 UN SW 5.6V
1 UN SW 5.6V
CN002 22P
TO IN-24 BOARD (CN504)
(See page 185)
VARIABLE DIVIDER
AFC ETC
INV
SELECTOR
90 SHIFT
LATCH
PS CHI
SEPA RATE
SYNTHESIS GATE
MODE CONTROLER
VIRS P
DELAY PULSE GANERATOR
11-14
IC802 CX23054 AFC PULSE GENERATOR
HD
C. SYNC
JOG VD
SP/LP
D
TO VI-65 BOARD (1/2)
(See page 119)
Q706 2SA812
Q706 CHROMA MUTE
Q808-810 REC CHROMA EQ

no mark : LP REC/PB mode
( ) : LP REC mode
〈 〉 : LP PB mode



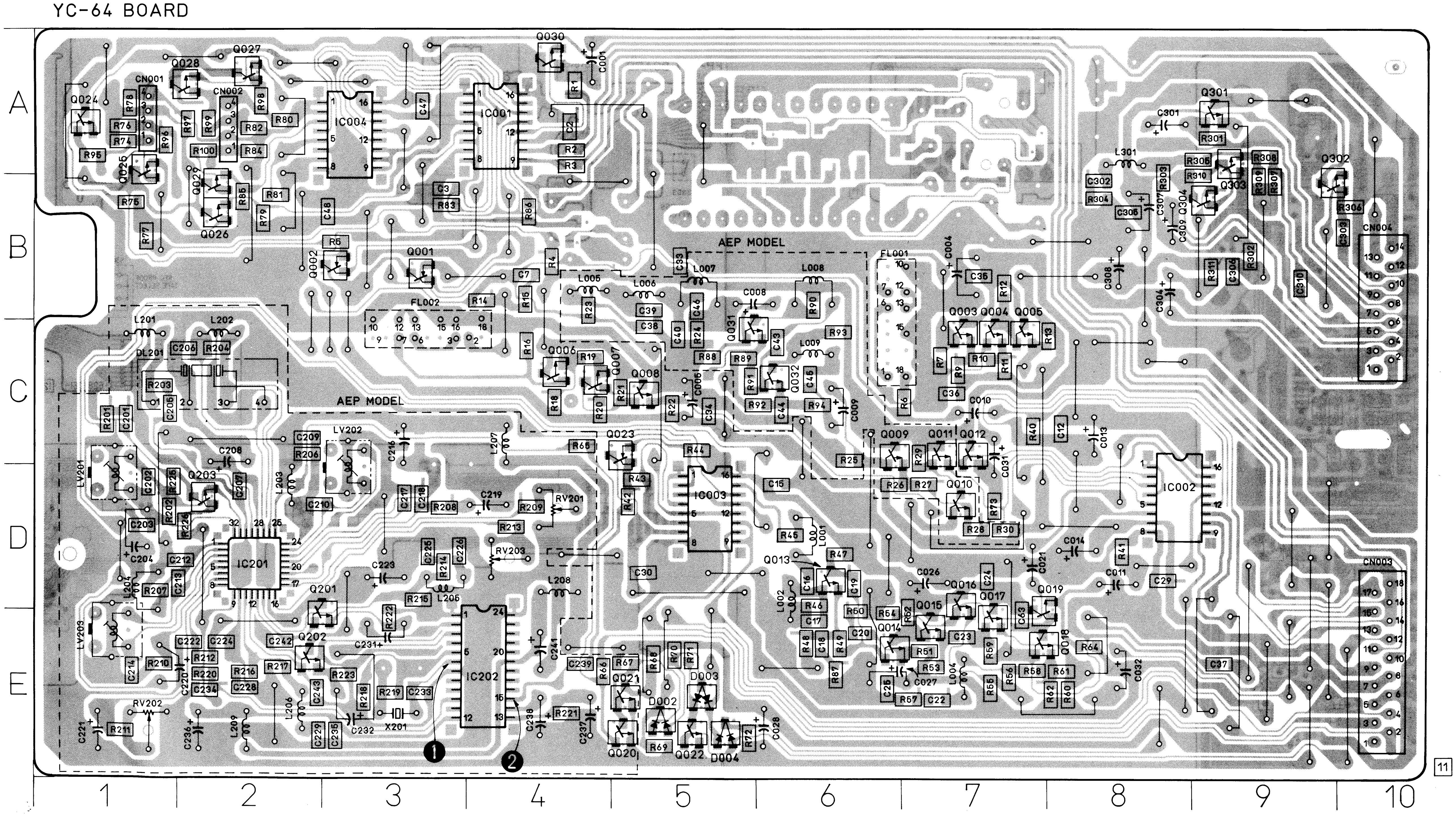
| | VIDEO SIGNAL | | | |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| REC | ➡ | ➡» | | |
| PB | ⇨ | ⇨» | | |

VIDEO VIDEO

## YC-64 (Y/CHROMA SIGNAL PROCESS) PRINTED WIRING BOARD
– Ref. No.: YC-64 Board; 3,000 series –

YC-64 BOARD

| | |
|---|---|
| D002 | E-5 |
| D003 | E-5 |
| D004 | E-5 |
| IC001 | A-4 |
| IC002 | D-8 |
| IC003 | D-5 |
| IC004 | A-3 |
| IC201 | D-2 |
| IC202 | E-4 |
| Q001 | B-3 |
| Q002 | B-3 |
| Q003 | C-7 |
| Q004 | C-7 |
| Q005 | C-7 |
| Q006 | C-4 |
| Q007 | C-4 |
| Q008 | C-5 |
| Q009 | C-6 |
| Q010 | D-7 |
| Q011 | C-7 |
| Q012 | C-7 |
| Q013 | D-6 |
| Q014 | E-6 |
| Q015 | E-7 |
| Q016 | D-7 |
| Q017 | E-7 |
| Q018 | E-8 |
| Q019 | D-8 |
| Q020 | E-5 |
| Q021 | E-5 |
| Q022 | E-5 |
| Q023 | C-5 |
| Q024 | A-1 |
| Q025 | A-1 |
| Q026 | B-2 |
| Q027 | A-2 |
| Q028 | A-2 |
| Q029 | B-2 |
| Q030 | A-4 |
| Q031 | C-5 |
| Q032 | C-6 |
| Q201 | E-2 |
| Q202 | E-2 |
| Q203 | D-2 |
| Q301 | A-1 |
| Q302 | B-9 |
| 303 | A-1 |
| 304 | B-9 |


YC-64 BOARD
A
B
C
D
E
1
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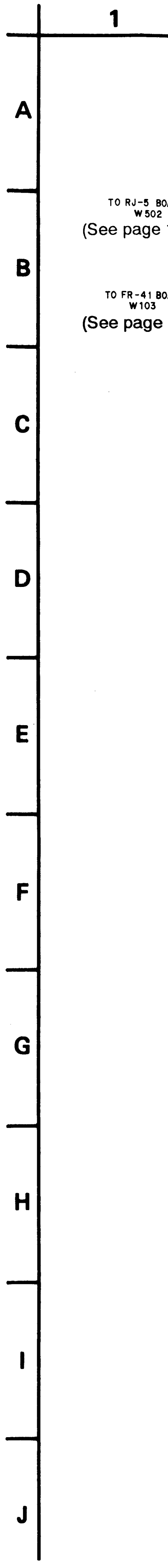
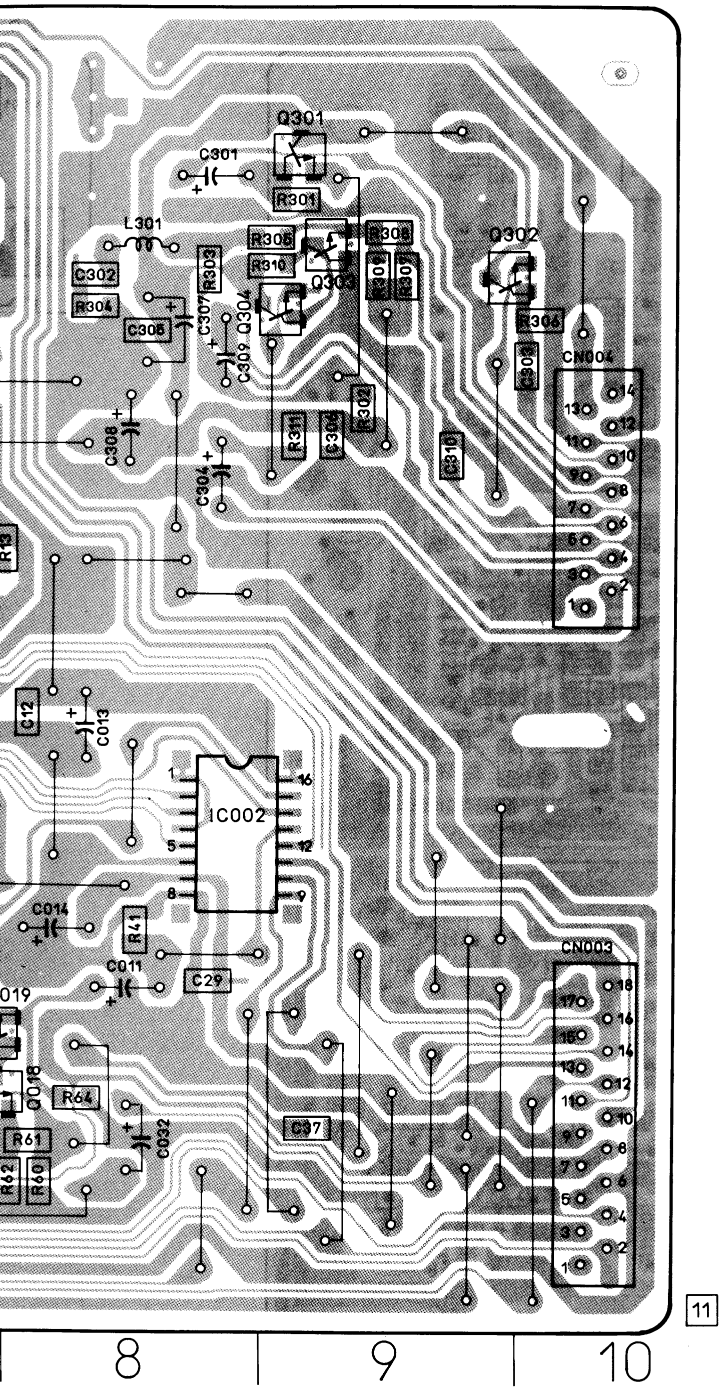
9
10
AEP MODEL
AEP MODEL
IC001
IC002
IC003
IC004
IC201
IC202
CN001
CN002
CN003
CN004
FL001
FL002
DL201
LV201
LV202
LV203
RV201
RV202
RV203
X201
Q001
Q002
Q003
Q004
Q005
Q006
Q007
Q008
Q009
Q010
Q011
Q012
Q013
Q014
Q015
Q016
Q017
Q018
Q019
Q020
Q021
Q022
Q023
Q024
Q025
Q026
Q027
Q028
Q029
Q030
Q031
Q032
Q201
Q202
Q203
Q301
Q302
Q303
Q304
D002
D003
D004
L001
L002
L004
L005
L006
L007
L008
L009
L201
L202
L203
L204
L205
L206
L207
L208
L209
L301
1
2
11

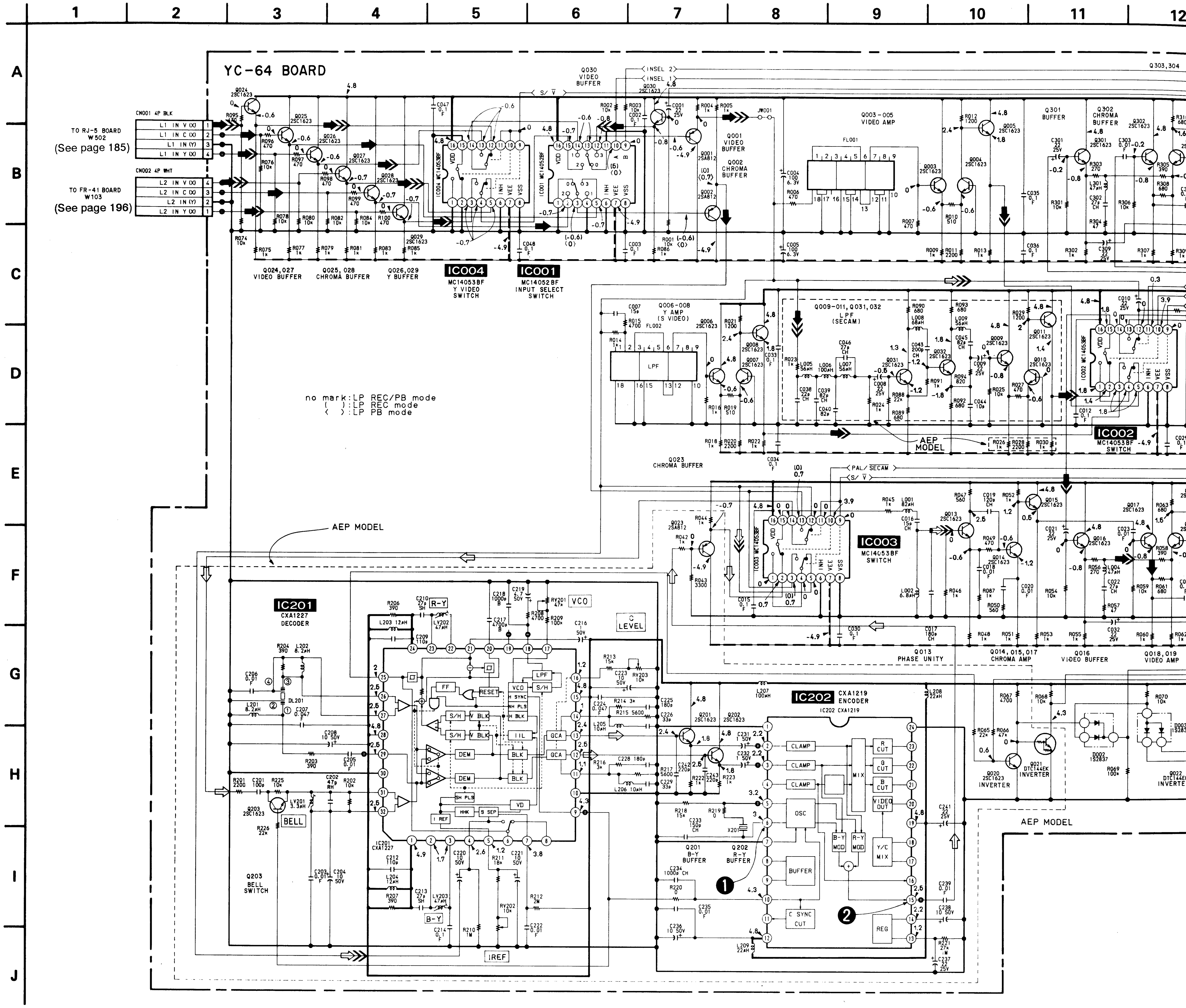
## YC-64 (Y/CHF
– Ref. No.: YC


1
A
B
C
D
E
F
G
H
I
J
TO RJ-5 BO
W502
(See page
TO FR-41 BO
W103
(See page


Q301
C301
L301
C302
R304
C306
R306
R301
R308
R310
Q303
R303
C307
Q304
C309
R305
R309
Q302
R307
R306
C303
C308
C304
R311
C305
R302
C310
CN004
IC002
C12
C013
C014
R41
C011
C29
CN003
C37
R64
R61
R62
R60
Q018
Q019
C032
11
8
9
10

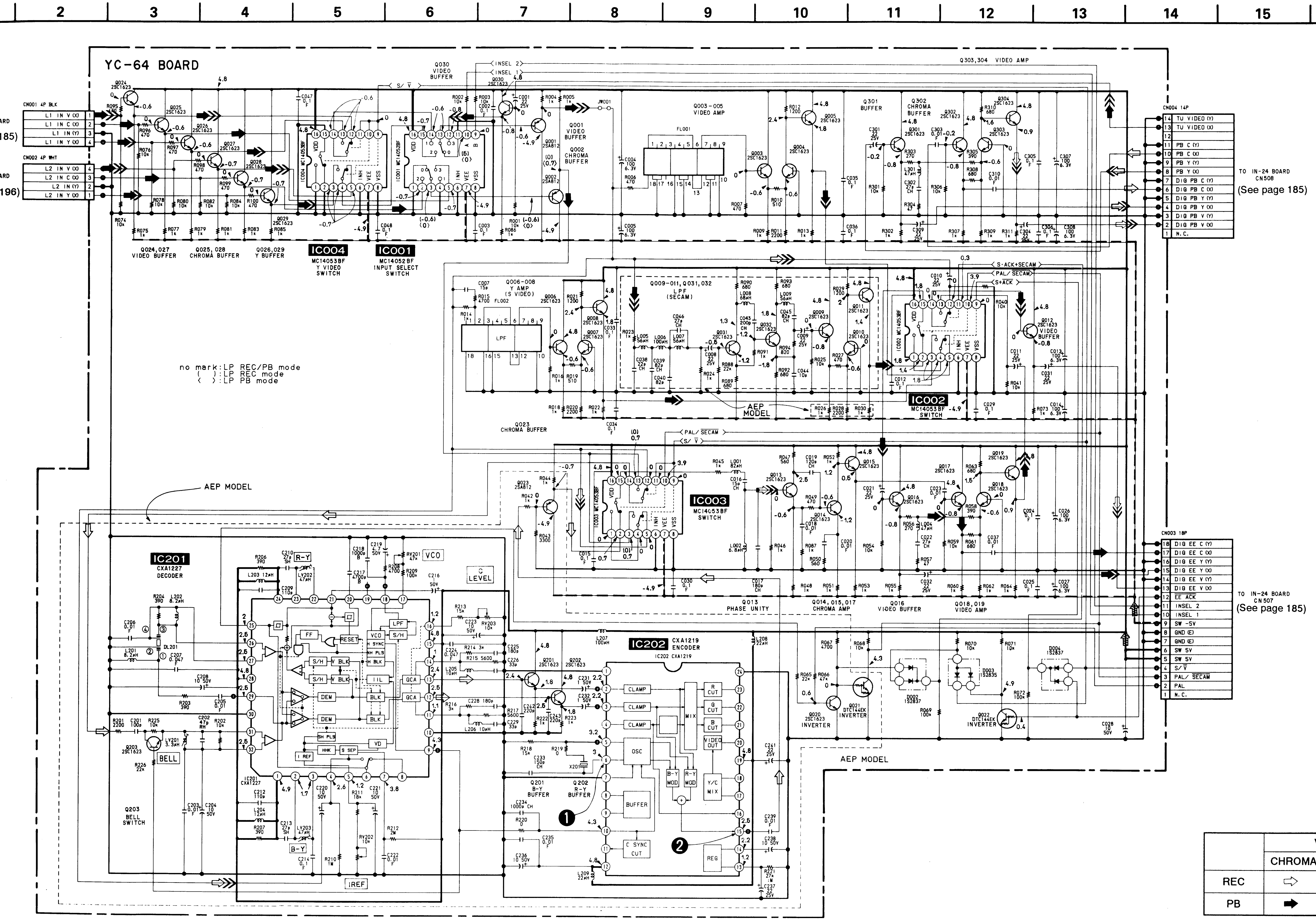
## YC-64 (Y/CHROMA SIGNAL PROCESS) SCHEMATIC DIAGRAM

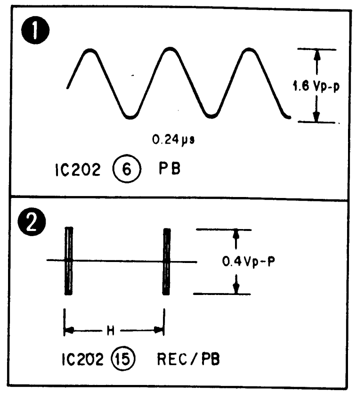
– Ref. No.: YC-64 Board; 3,000 series –


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
H
I
J
YC-64 BOARD
TO RJ-5 BOARD W502 (See page 185)
TO FR-41 BOARD W103 (See page 196)
CN001 4P BLK
CN002 4P WHT
L1 IN V (X)
L1 IN C (X)
L1 IN (Y)
L1 IN Y (X)
L2 IN V (X)
L2 IN C (X)
L2 IN (Y)
L2 IN Y (X)
Q024,027 VIDEO BUFFER
Q025,028 CHROMA BUFFER
Q026,029 Y BUFFER
IC004 MC14053BF Y VIDEO SWITCH
IC001 MC14052BF INPUT SELECT SWITCH
Q030 VIDEO BUFFER
INSEL 2
INSEL 1
S/V̄
Q001 VIDEO BUFFER
Q002 CHROMA BUFFER
Q003-005 VIDEO AMP
FL001
Q301 BUFFER
Q302 CHROMA BUFFER
Q303,304
Q006-008 Y AMP (S VIDEO)
FL002
LPF
Q009-011, Q031, 032 LPF (SECAM)
IC002 MC14053BF SWITCH
AEP MODEL
Q023 CHROMA BUFFER
no mark: LP REC/PB mode
( ): LP REC mode
〈 〉: LP PB mode
PAL/SECAM
S/V̄
IC003 MC14053BF SWITCH
Q013 PHASE UNITY
Q014, 015, 017 CHROMA AMP
Q016 VIDEO BUFFER
Q018, 019 VIDEO AMP
AEP MODEL
IC201 CXA1227 DECODER
R-Y
VCO
C LEVEL
FF
RESET
S/H
BLK
DEM
H SYNC
H PLS
IIL
GCA
LPF
SH PLS
HHK
B SEP
VD
I REF
BELL
B-Y
IREF
Q203 BELL SWITCH
IC202 CXA1219 ENCODER
Q201 B-Y BUFFER
Q202 R-Y BUFFER
CLAMP
R CUT
G CUT
B CUT
MIX
VIDEO OUT
OSC
B-Y MOD
R-Y MOD
Y/C MIX
BUFFER
C SYNC CUT
REG
❶
❷
Q020 2SC1623 INVERTER
Q021 DTC144EK INVERTER
Q022 DTC144EK INVERTER
D002 1SS2837
AEP MODEL

## ROMA SIGNAL PROCESS) SCHEMATIC DIAGRAM

-64 Board; 3,000 series –


2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
YC-64 BOARD
CN001 4P BLK
L1 IN V (X)
L1 IN C (X)
L1 IN (Y)
L1 IN Y (X)
CN002 4P WHT
L2 IN V (X)
L2 IN C (X)
L2 IN (Y)
L2 IN Y (X)
ARD
185)
ARD
196)
Q024,027 VIDEO BUFFER
Q025,028 CHROMA BUFFER
Q026,029 Y BUFFER
IC004
MC14053BF
Y VIDEO SWITCH
IC001
MC14052BF
INPUT SELECT SWITCH
Q030 VIDEO BUFFER
Q001 VIDEO BUFFER
Q002 CHROMA BUFFER
Q003-005 VIDEO AMP
FL001
Q301 BUFFER
Q302 CHROMA BUFFER
Q303,304 VIDEO AMP
INSEL 2
INSEL 1
S/V̄
CN004 14P
TU VIDEO (Y)
TU VIDEO (X)
PB C (Y)
PB C (X)
PB Y (Y)
PB Y (X)
DIG PB C (Y)
DIG PB C (X)
DIG PB Y (Y)
DIG PB Y (X)
DIG PB V (Y)
DIG PB V (X)
N.C.
TO IN-24 BOARD
CN508
(See page 185)
Q006-008 Y AMP (S VIDEO)
FL002
LPF
Q009-011,Q031,032 LPF (SECAM)
S-ACK+SECAM
PAL/SECAM
S+ACK
IC002
MC14053BF
SWITCH
Q012 VIDEO BUFFER
no mark:LP REC/PB mode
( ):LP REC mode
〈 〉:LP PB mode
AEP MODEL
Q023 CHROMA BUFFER
PAL/SECAM
S/V̄
IC003
MC14053BF
SWITCH
Q013 PHASE UNITY
Q014,015,017 CHROMA AMP
Q016 VIDEO BUFFER
Q018,019 VIDEO AMP
CN003 18P
DIG EE C (Y)
DIG EE C (X)
DIG EE Y (Y)
DIG EE Y (X)
DIG EE V (Y)
DIG EE V (X)
EE ACK
INSEL 2
INSEL 1
SW -5V
GND (E)
GND (E)
SW 5V
SW 5V
S/V̄
PAL/SECAM
PAL
N.C.
TO IN-24 BOARD
CN507
(See page 185)
AEP MODEL
IC201
CXA1227
DECODER
R-Y
VCO
C LEVEL
B-Y
BELL
IREF
Q203 BELL SWITCH
IC202 CXA1219 ENCODER
CLAMP
OSC
BUFFER
C SYNC CUT
B-Y MOD
R-Y MOD
Y/C MIX
VIDEO OUT
MIX
R CUT
G CUT
B CUT
REG
Q201 B-Y BUFFER
Q202 R-Y BUFFER
Q020 INVERTER
Q021 DTC144EK INVERTER
Q022 DTC144EK INVERTER
AEP MODEL
❶
❷


❶
1.6Vp-p
0.24μs
IC202 ⑥ PB
❷
0.4Vp-P
H
IC202 ⑮ REC/PB

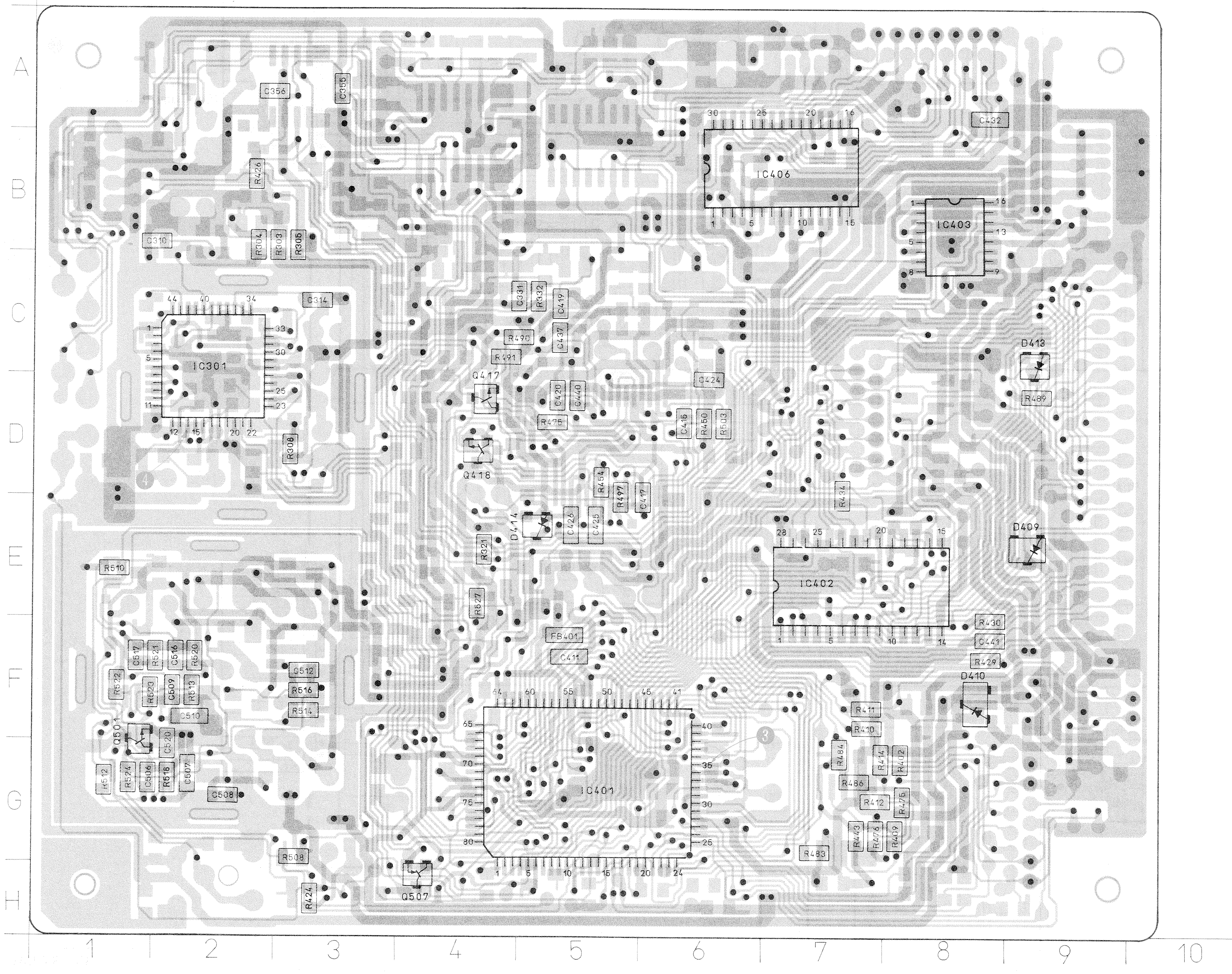
| | VIDEO SIGNAL | | |
|---|---|---|---|
| | CHROMA | Y | Y/CHROMA |
| REC | ⇨ | ➡ | ➡➡ |
| PB | ➡ | ⇨ | ⇨⇨ |

## CM-15 (SERVO/SYSTEM CONTROL), UC-4, CC-26 (SIGNAL INTERMEDIATION) PRINTED WIRING BOARDS

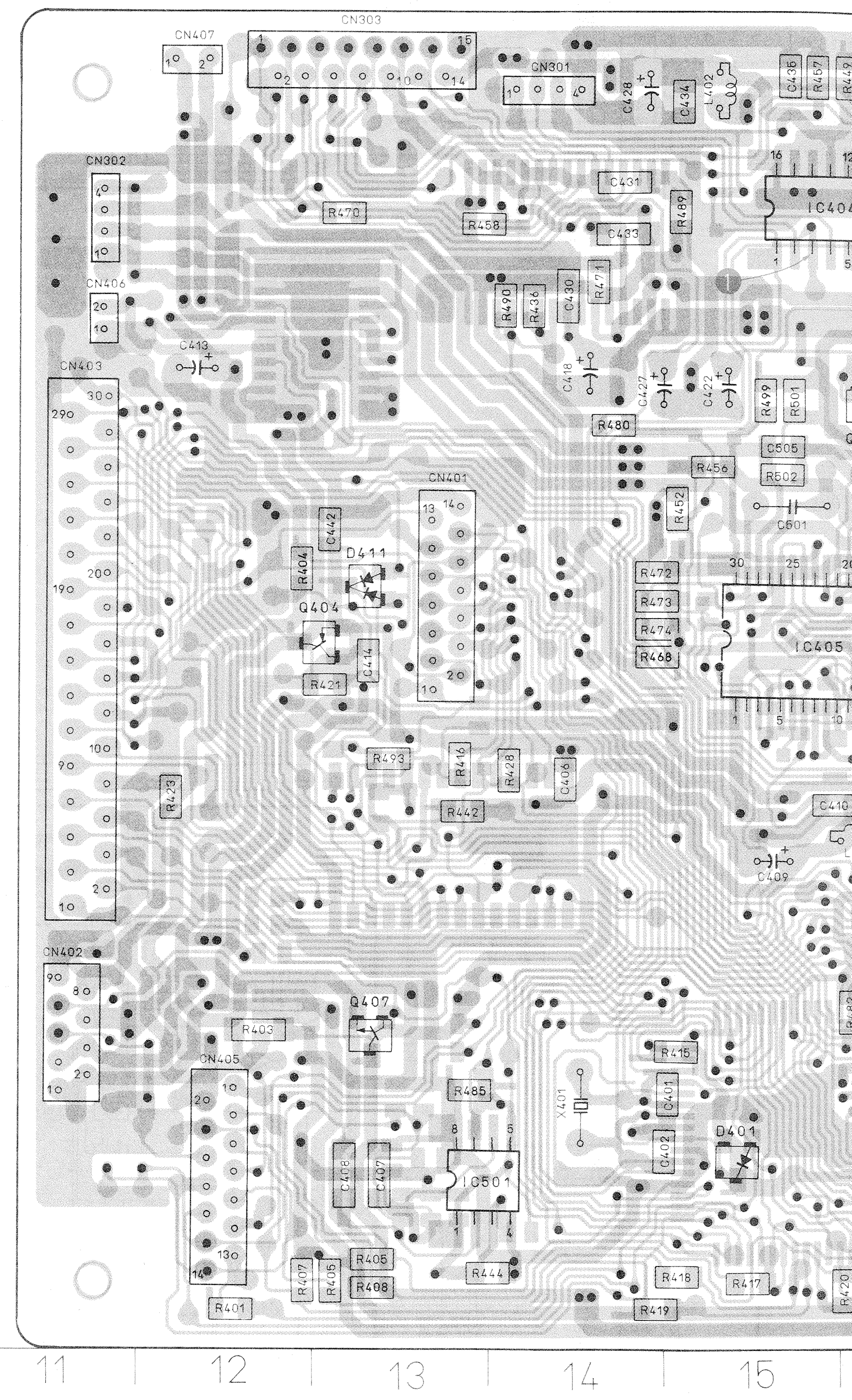
– Ref. No.: CN-15, UC-4, CC-26 Boards; 4,000 series –

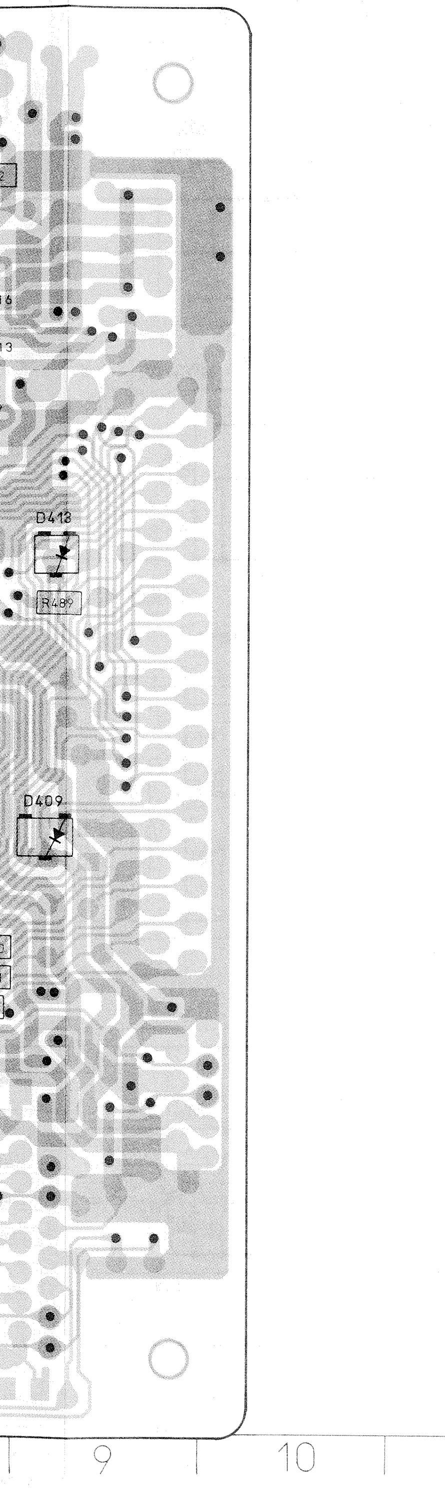
| CM-15 BOARD | |
|---|---|
| D401 | G-15 |
| D409 | E-9 |
| D410 | F-8 |
| D411 | D-13 |
| D413 | C-9 |
| D414 | E-5 |
| D501 | E-18 |
| D502 | F-18 |
| D503 | E-17 |
| IC301 | C-2 |
| IC302 | B-17 |
| IC303 | A-18 |
| IC401 | G-5 |
| IC402 | E-7 |
| IC403 | B-8 |
| IC404 | B-15 |
| IC405 | D-15 |
| IC406 | B-7 |
| IC501 | G-13 |
| IC502 | F-19 |
| Q301 | C-18 |
| Q302 | D-17 |
| Q303 | E-17 |
| Q304 | C-17 |
| Q305 | C-17 |
| Q306 | C-16 |
| Q308 | A-19 |
| Q403 | F-16 |
| Q404 | D-13 |
| Q407 | F-13 |
| Q417 | D-4 |
| Q418 | D-4 |
| Q501 | F-1 |
| Q502 | F-18 |
| Q503 | F-18 |
| Q504 | E-19 |
| Q505 | F-19 |
| Q506 | H-18 |
| Q507 | H-4 |
| Q508 | H-16 |
| Q509 | F-17 |
| Q510 | F-16 |

CM-15 BOARD (COMPONENT SIDE)

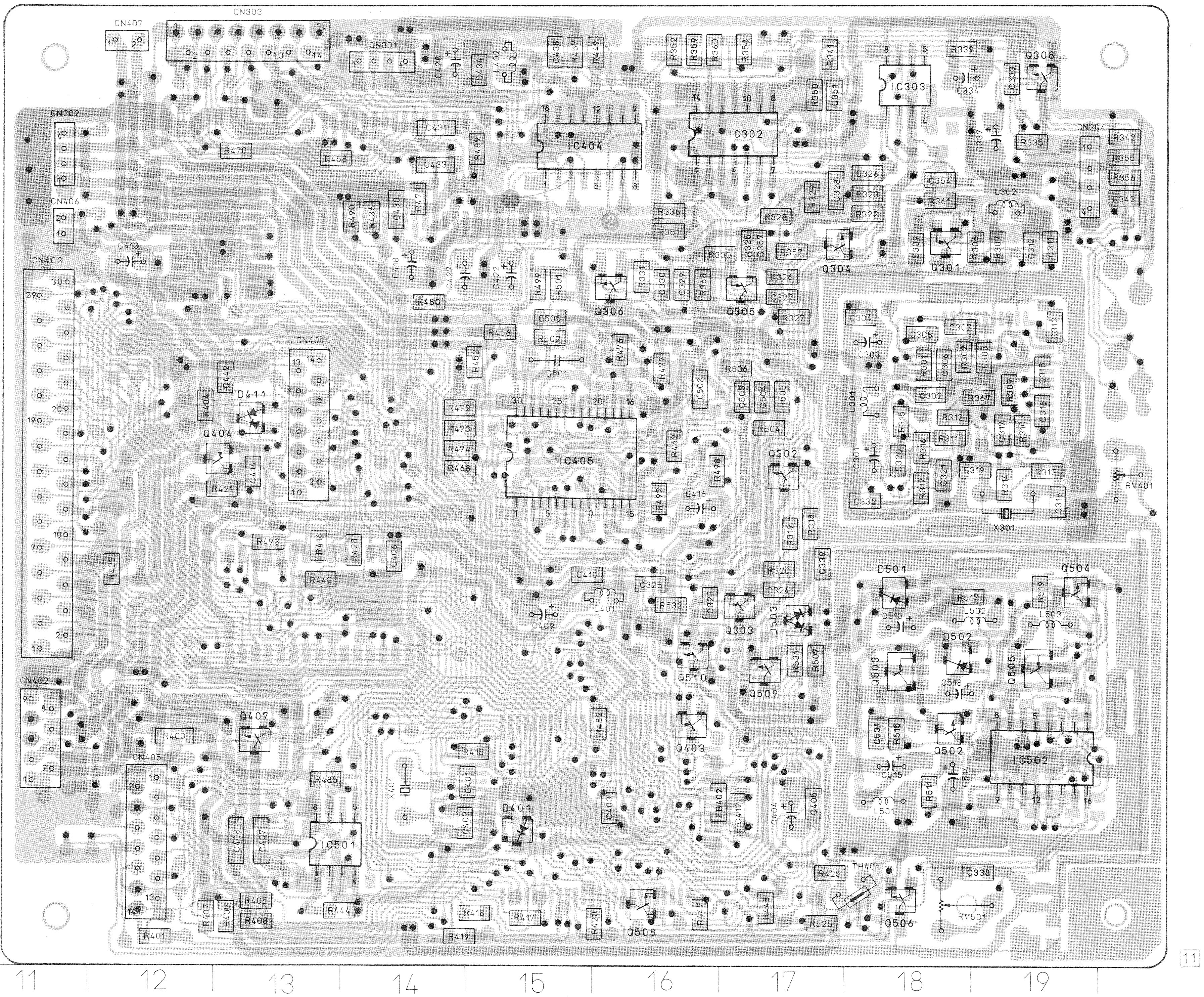

A
B
C
D
E
F
G
H
1
2
3
4
5
6
7
8
9
10
IC301
IC401
IC402
IC403
IC406
D409
D410
D413
D414
Q417
Q418
Q501
Q507
C356
C355
C432
C310
C314
C331
C419
C437
C420
C440
C424
C416
C426
C425
C417
C441
C411
C512
C510
C508
R426
R304
R303
R305
R308
R332
R490
R491
R475
R450
R503
R454
R497
R434
R489
R321
R627
R430
R429
R411
R410
R484
R486
R412
R414
R402
R476
R409
R443
R483
R510
R516
R514
R508
R424
FB401

CM-15 BOARD (CONDUCTOR SIDE)

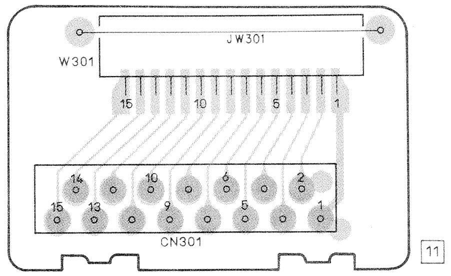

11
12
13
14
15
CN303
CN407
CN301
CN302
CN406
CN403
CN401
CN402
CN405
IC404
IC405
IC501
D411
D401
Q404
Q407
X401
C428
C434
C431
C433
C430
C413
C418
C427
C422
C505
C502
C601
C442
C414
C406
C409
C401
C402
C408
C407
R470
R458
R489
R490
R436
R411
R480
R499
R501
R456
R452
R472
R473
R474
R468
R404
R421
R493
R416
R428
R442
R423
R403
R485
R415
R405
R408
R444
R401
R407
R406
R418
R417
R419
R420


D413
R489
D409
9
10

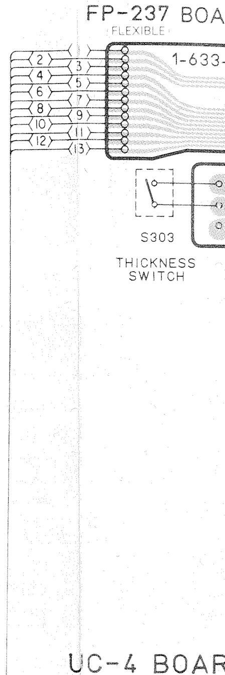
## CM-15 BOARD (CONDUCTOR SIDE)


CN407
CN303
CN301
CN302
CN406
CN403
CN401
CN402
CN405
CN304
IC404
IC302
IC303
IC405
IC501
IC502
Q308
Q304
Q301
Q306
Q305
Q404
Q302
Q303
Q407
Q510
Q509
Q403
Q503
Q502
Q504
Q505
Q506
Q508
D411
D401
D501
D502
D503
X301
X401
RV401
RV501
TH401
L301
L302
L402
L401
L501
L502
L503
FB402
11
11
12
13
14
15
16
17
18
19

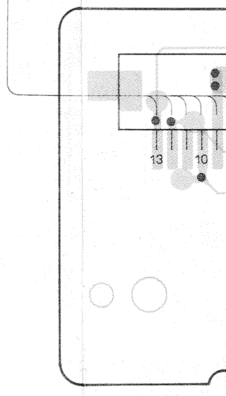
## CC-26 BOARD

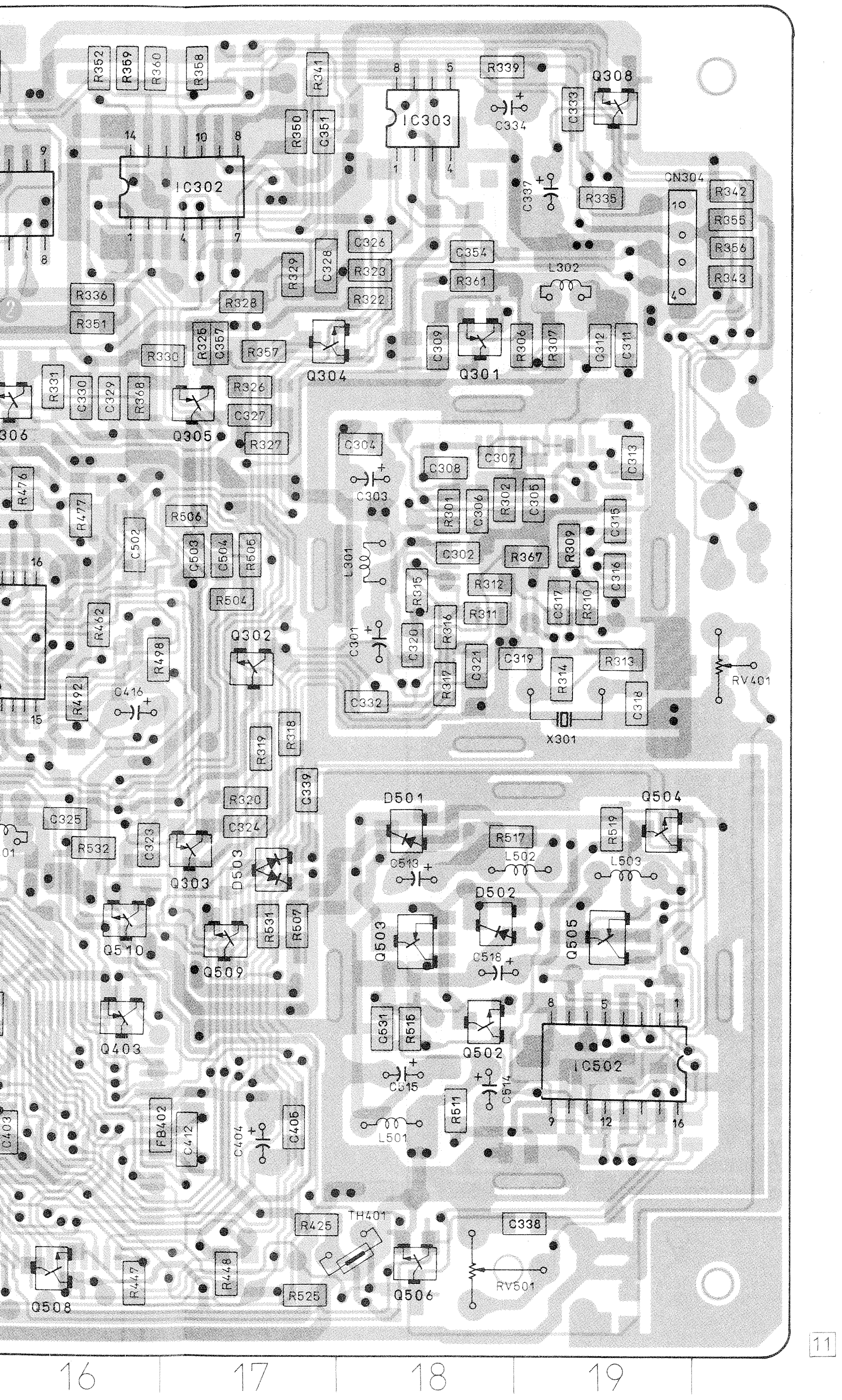

W301
JW301
CN301
11

## FP-237 BOA

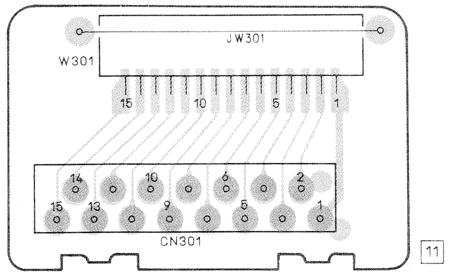

FLEXIBLE
1-633-
S303
THICKNESS SWITCH

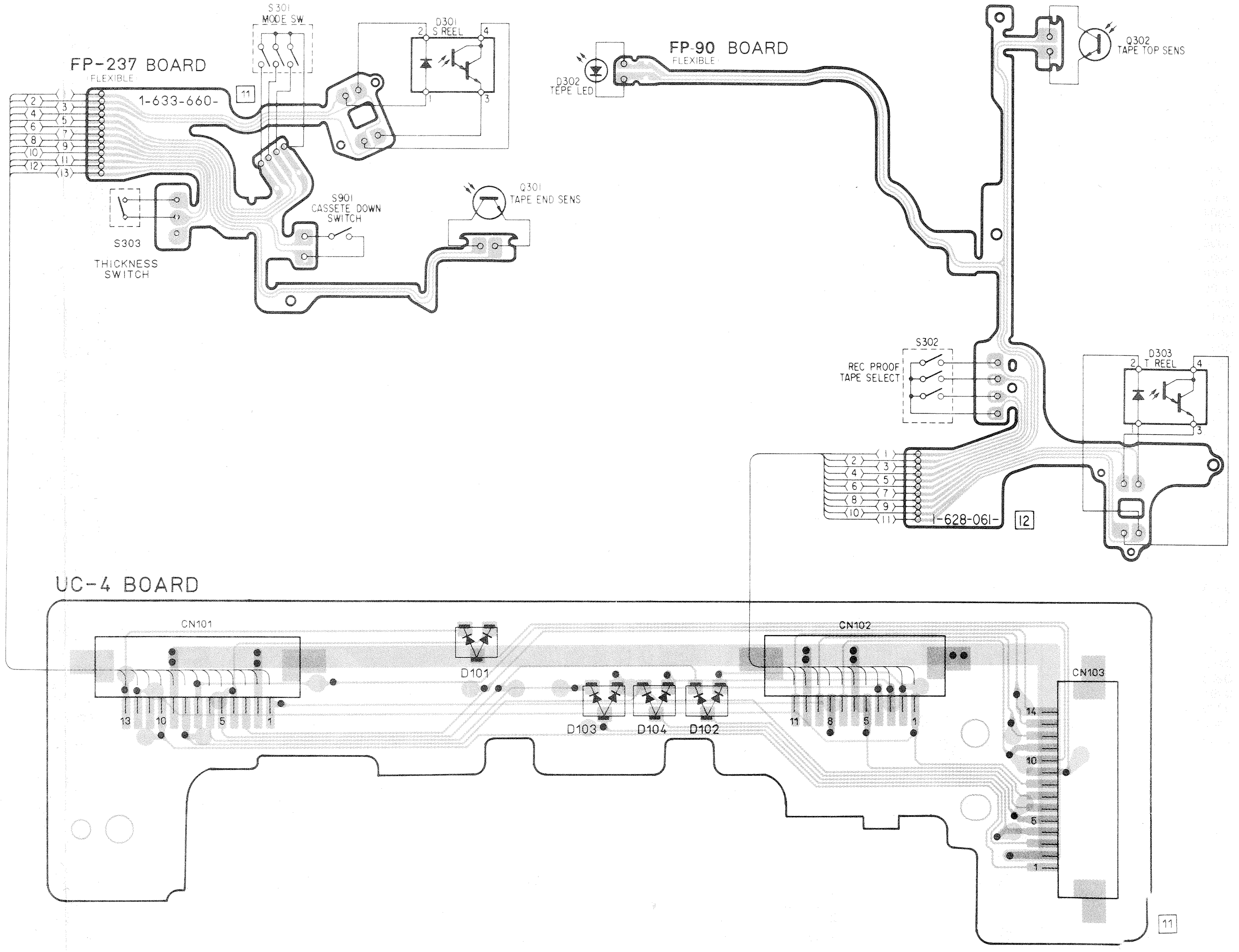
## UC-4 BOAR




R352
R359
R360
R358
R341
R339
Q308
C334
C333
IC303
R350
C351
IC302
C337
R335
CN304
R342
R355
R356
R343
C326
R329
C328
R323
R322
C354
R361
L302
R336
R351
R328
R330
R325
C357
R357
Q304
C309
Q301
R306
R307
C312
C311
C330
C329
R368
R326
C327
Q305
R327
C304
C303
C307
C308
C313
R476
R477
R506
C502
C503
R504
R505
R301
C306
R302
C305
C315
L301
C302
R367
R309
R315
R312
C316
C317
R310
R311
R316
C320
C301
Q302
R442
R498
Q416
C319
R314
R313
RV401
R492
C321
R317
C332
X301
C318
R319
R318
R320
C339
C324
C325
R532
C323
Q303
D503
D501
Q504
R517
R519
C513
L502
L503
D502
Q510
R531
R607
Q509
Q503
C516
Q505
C531
R516
Q502
IC502
Q403
C515
C514
R511
FB402
C412
C404
C406
C403
L501
R425
TH401
C338
R447
R448
R525
Q506
RV501
Q508
16
17
18
19
11

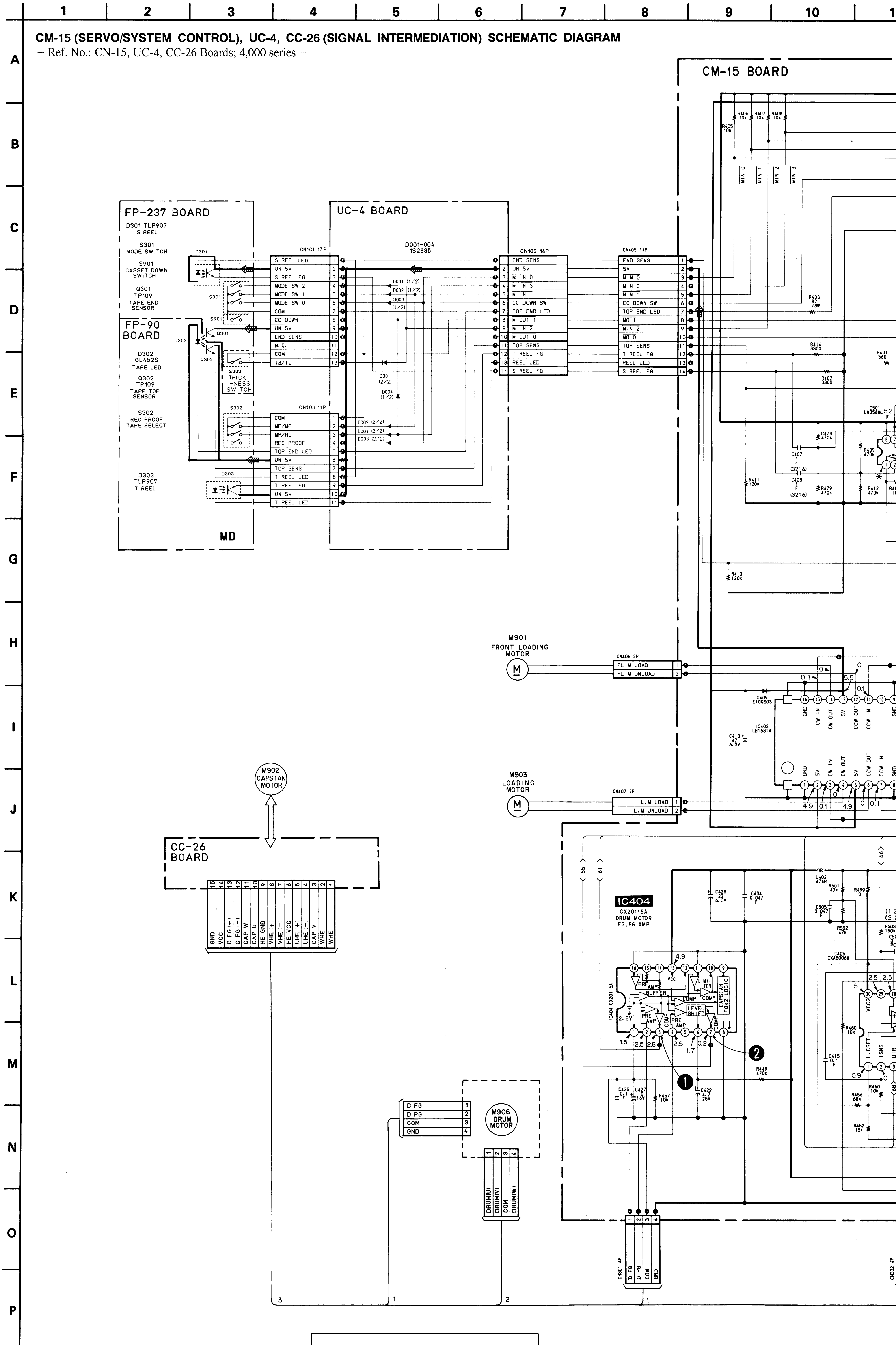
CC-26 BOARD


W301
JW301
CN301


FP-237 BOARD
FLEXIBLE
1-633-660-
11
S301
MODE SW
D301
S REEL
S901
CASSETE DOWN SWITCH
Q301
TAPE END SENS
S303
THICKNESS SWITCH
D302
TAPE LED
FP-90 BOARD
FLEXIBLE
Q302
TAPE TOP SENS
S302
REC PROOF
TAPE SELECT
D303
T REEL
1-628-061-
12
UC-4 BOARD
CN101
D101
CN102
CN103
D103
D104
D102
11

## CM-15 (SERVO/SYSTEM CONTROL), UC-4, CC-26 (SIGNAL INTERMEDIATION) SCHEMATIC DIAGRAM

– Ref. No.: CN-15, UC-4, CC-26 Boards; 4,000 series –


1
2
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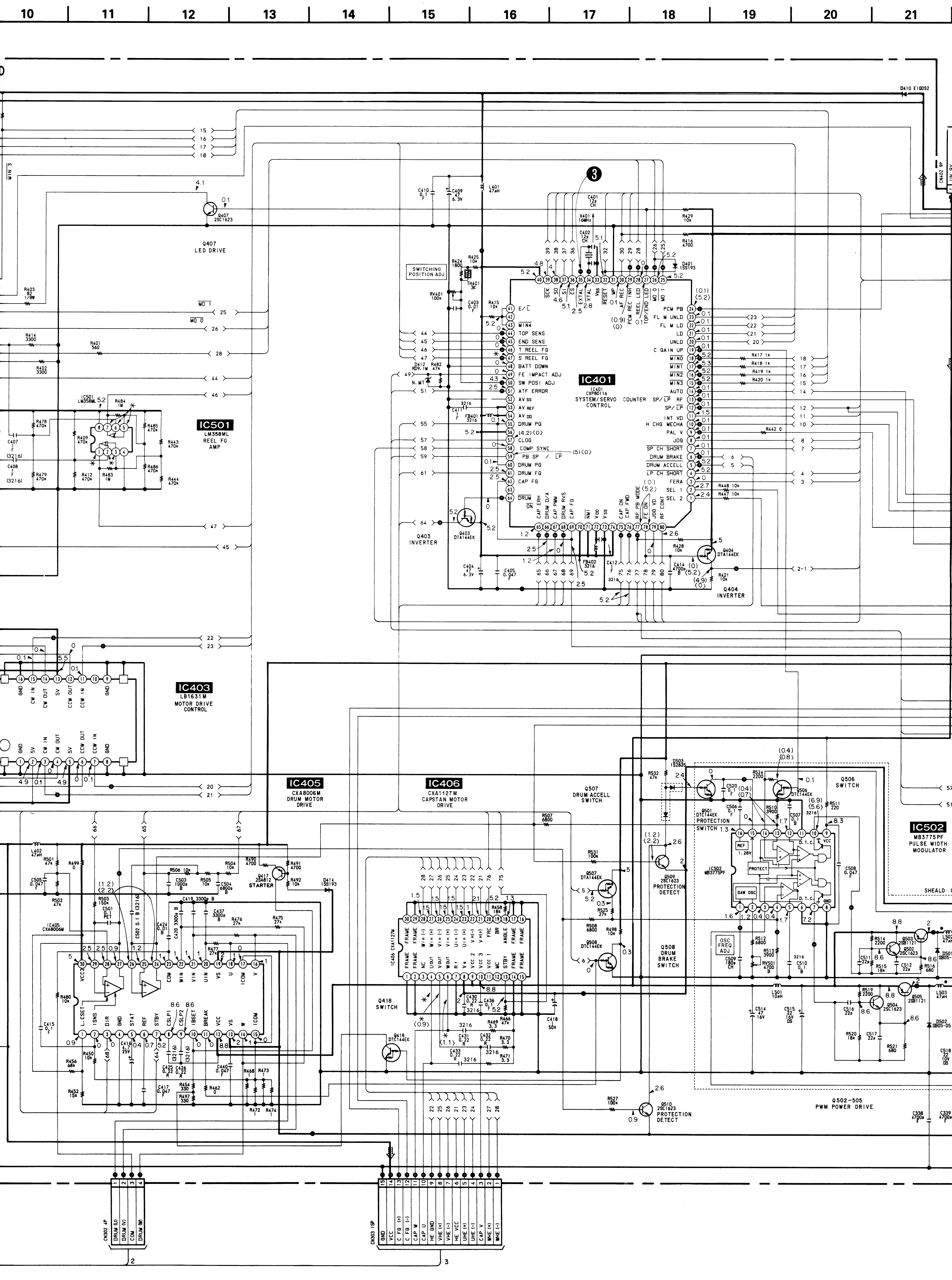
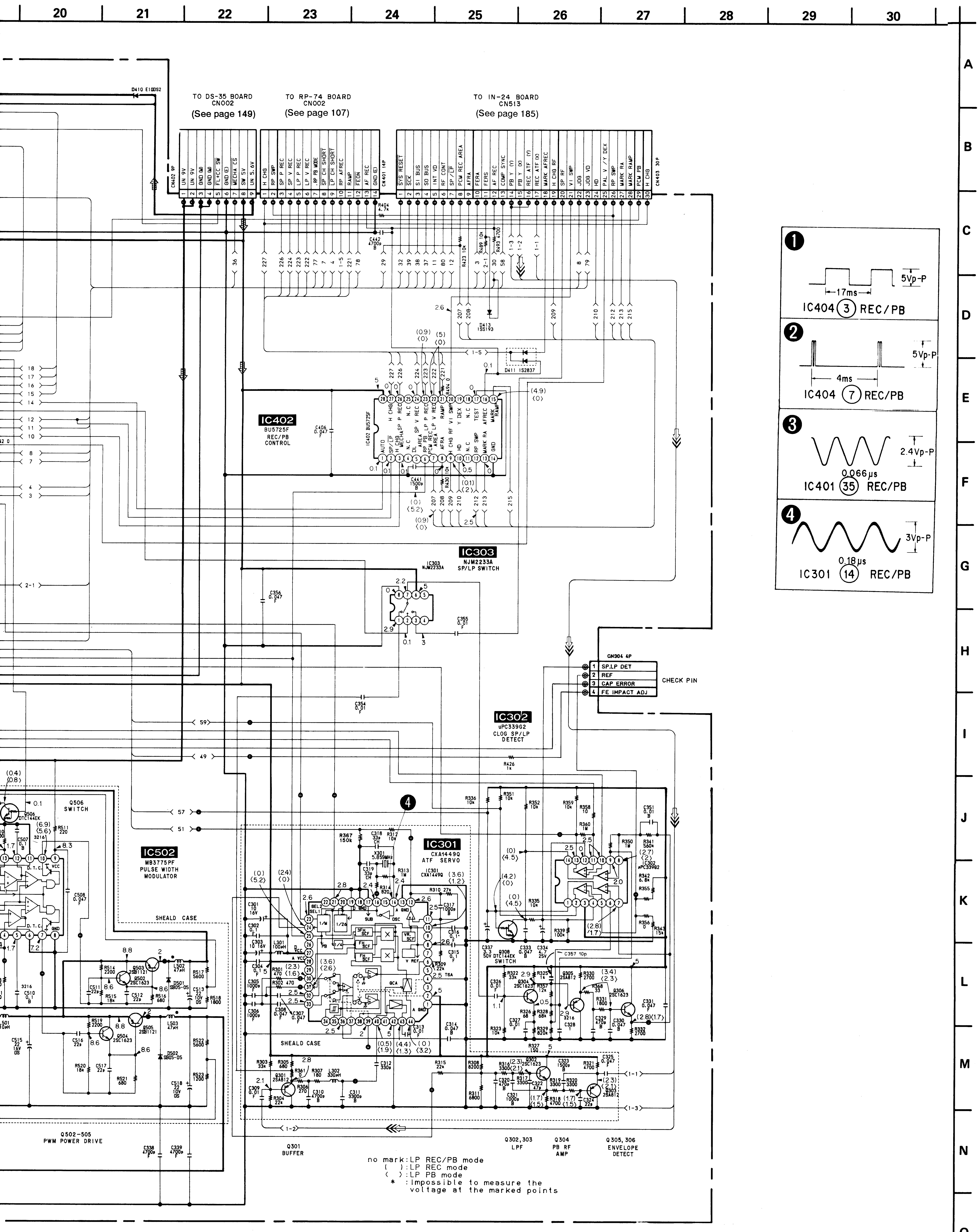
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
CM-15 BOARD
FP-237 BOARD
D301 TLP907 S REEL
S301 MODE SWITCH
S901 CASSET DOWN SWITCH
Q301 TP109 TAPE END SENSOR
FP-90 BOARD
D302 GL452S TAPE LED
Q302 TP109 TAPE TOP SENSOR
S302 REC PROOF TAPE SELECT
D303 TLP907 T REEL
S303 THICK -NESS SWITCH
MD
UC-4 BOARD
CN101 13P
D001-004 1S2835
CN103 14P
CN103 11P
CN405 14P
S REEL LED
UN 5V
S REEL FG
MODE SW 2
MODE SW 1
MODE SW 0
COM
CC DOWN
END SENS
N.C.
13/10
ME/MP
MP/HG
REC PROOF
TOP END LED
TOP SENS
T REEL LED
T REEL FG
M IN 0
M IN 3
M IN 1
CC DOWN SW
M OUT 1
M IN 2
M OUT 0
REEL LED
M901 FRONT LOADING MOTOR
CN406 2P
FL M LOAD
FL M UNLOAD
M903 LOADING MOTOR
CN407 2P
L.M LOAD
L.M UNLOAD
IC403 LB1631M
D409 E10QS03
C413 47 6.3V
M902 CAPSTAN MOTOR
CC-26 BOARD
GND
VCC
C FG (+)
C FG (–)
CAP W
CAP U
HE GND
VHE (+)
VHE (–)
HE VCC
UHE (+)
UHE (–)
CAP V
WHE
IC404
CX20115A DRUM MOTOR FG,PG AMP
PRE AMP
BUFFER
LIMITER
COMP
LEVEL SHIFT
CAPSTAN FG×2 DBL1C
M906 DRUM MOTOR
D FG
D PG
DRUM(U)
DRUM(V)
DRUM(W)
CN301 4P
IC405 CXA8006M
IC501 LM358M
R403 82 1/8W
R414 3300
R401 560
R402 3300
R410 120k
R411 120k
R478 470k
R479 470k
R409 470k
R412 470k
C407
C408
(3216)
R405 10k
R406 10k
R407 10k
R408 10k
MIN 0
MIN 1
MIN 2
MIN 3
L402 47μH
R501 47k
R499 0
R502 47k
C505 0.047
C428 22 6.3V
C434 0.047
C435 0.1
C427 10 16V
R457 10k
C422 4.7 25V
R449 470k
R480 10k
C415 0.1
R456 68k
R450 10k
R452 15k
55
61
66
➊
➋
CN302 4P


10
11
12
13
14
15
16
17
18
19
20
21
Q407 2SC1623
Q407 LED DRIVE
IC501 LM358ML REEL FG AMP
IC401 CXP80116 SYSTEM/SERVO CONTROL
SWITCHING POSITION ADJ
X401 16MHz
D401 1SS193
D410 E10DS2
Q403 DTA144EK
Q403 INVERTER
Q404 DTA144EK
Q404 INVERTER
IC403 LB1631M MOTOR DRIVE CONTROL
IC405 CXA8006M DRUM MOTOR DRIVE
IC406 CXA1127M CAPSTAN MOTOR DRIVE
Q417 2SA812 STARTER
D414 1SS193
Q418 DTC144EK
Q418 SWITCH
Q507 DTA144EK
Q507 DRUM ACCELL SWITCH
Q508 DTC144EK
Q508 DRUM BRAKE SWITCH
Q509 2SC1623 PROTECTION DETECT
Q510 2SC1623 PROTECTION DETECT
D503 1S2835
Q501 DTC144EK PROTECTION SWITCH
Q506 DTC144EK
Q506 SWITCH
IC502 MB3775PF PULSE WIDTH MODULATOR
OSC FREQ ADJ
SAW OSC
PROTECT
REF 1.28V
Q502-505 PWM POWER DRIVE
SHEALD
CN302 4P
DRUM (U)
DRUM (V)
COM
DRUM (W)
CN303 15P
GND
VCC
C FG (+)
C FG (-)
CAP W
CAP U
HE GND
VHE (+)
VHE (-)
HE VCC
UHE (+)
UHE (-)
CAP V
WHE (+)
WHE (-)
CN402 9P

**SERVO S**

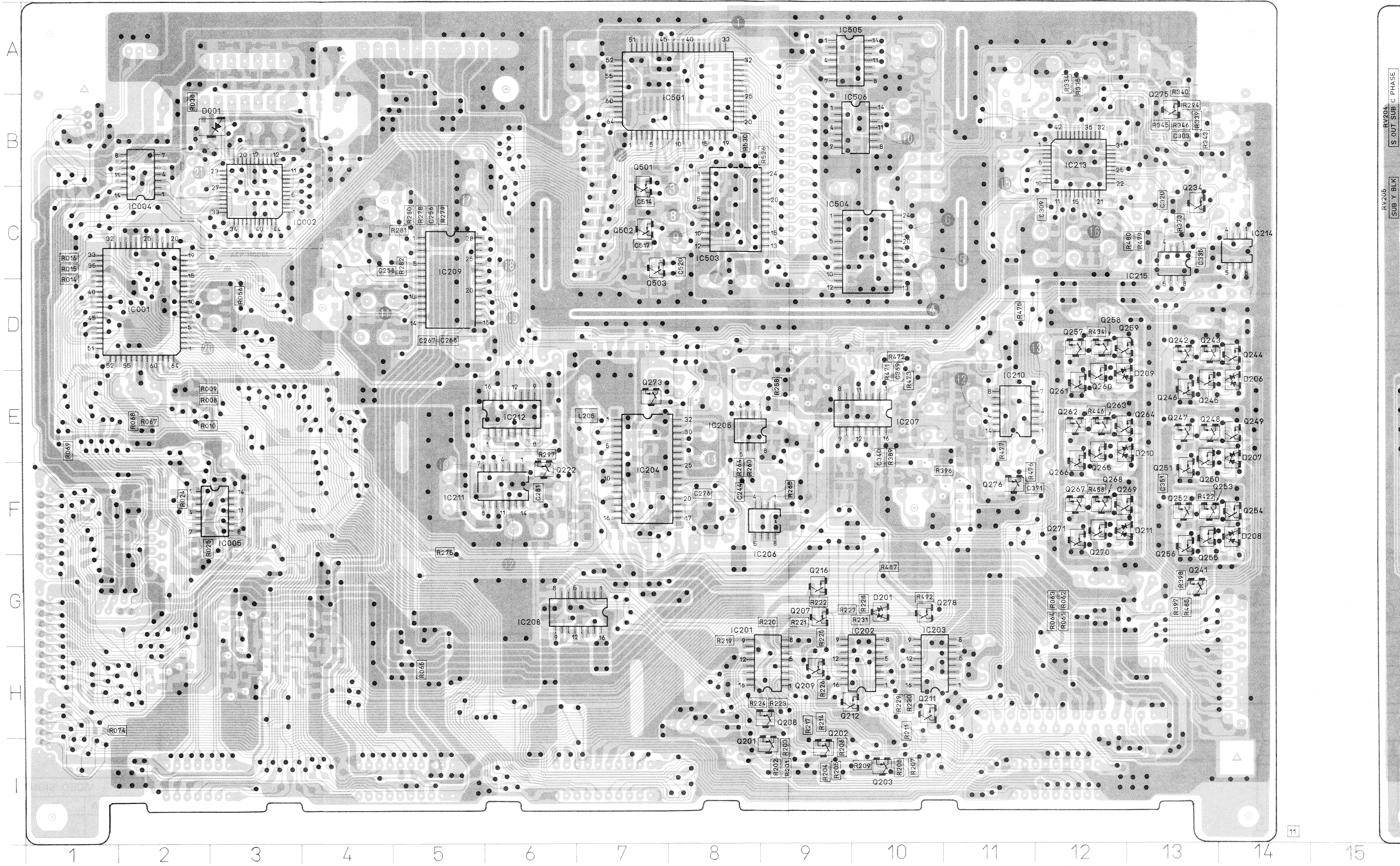

20
21
22
23
24
25
26
27
28
29
30
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
TO DS-35 BOARD CN002 (See page 149)
TO RP-74 BOARD CN002 (See page 107)
TO IN-24 BOARD CN513 (See page 185)
CN402 9P
UN 9V
UN 9V
GND (M)
GND (M)
FL+CC SW
GND (E)
MECHA CS
SW 5V
UN 5.6V
H CHG
RP SWP
SP P REC
SP V REC
LP P REC
LP V REC
AFRA
SP CH SHORT
LP CH SHORT
RP AFREC
RAMP
FEDN
AF REC
GND (E)
CN401 14P
SYS RESET
SCK
SI BUS
SO BUS
INT VD
RF CONT
SP/LP
PCM REC AREA
AFRA
FERA
FERS
AF REC
COMP SYNC
PB Y (Y)
PB Y (X)
REC ATF (Y)
REC ATF (X)
MARK AFREC
H CHG RF
SP RF
VI SWP
JOG
JOG VD
HD
PAL V /Y DEX
RP SWP
MARK RA
MARK RAMP
PCM PB
H CHG
CN403 30P
D410 E10DS2
R404 4.7k
C442 4700p
IC402
BU5725F
REC/PB CONTROL
C406 0.047
D413 1SS193
D411 1S2837
C441 1500p
R430 10k
IC303
NJM2233A
SP/LP SWITCH
C356 0.047
C355 0.01
C354 0.01
CN304 4P
SP.LP DET
REF
CAP ERROR
FE IMPACT ADJ
CHECK PIN
IC302
uPC339G2
CLOG SP/LP DETECT
R426 1k
IC301
CXA1449Q
ATF SERVO
X301 5.859MHz
IC502
MB3775PF
PULSE WIDTH MODULATOR
Q506 SWITCH
SHEALD CASE
Q502-505
PWM POWER DRIVE
Q301
BUFFER
Q302,303
LPF
Q304
PB RF AMP
Q305,306
ENVELOPE DETECT
Q308 DTC144EK SWITCH
no mark:LP REC/PB mode
( ):LP REC mode
〈 〉:LP PB mode
* :Impossible to measure the voltage at the marked points
❶
5Vp-P
17ms
IC404 ③ REC/PB
❷
5Vp-P
4ms
IC404 ⑦ REC/PB
❸
2.4Vp-P
0.066μs
IC401 (35) REC/PB
❹
3Vp-P
0.18μs
IC301 ⑭ REC/PB

| | VIDEO SIGNAL | | |
|---|---|---|---|
| | CHROMA | Y | Y/CHROMA |
| REC | | | |
| PB | | | ⇛ |

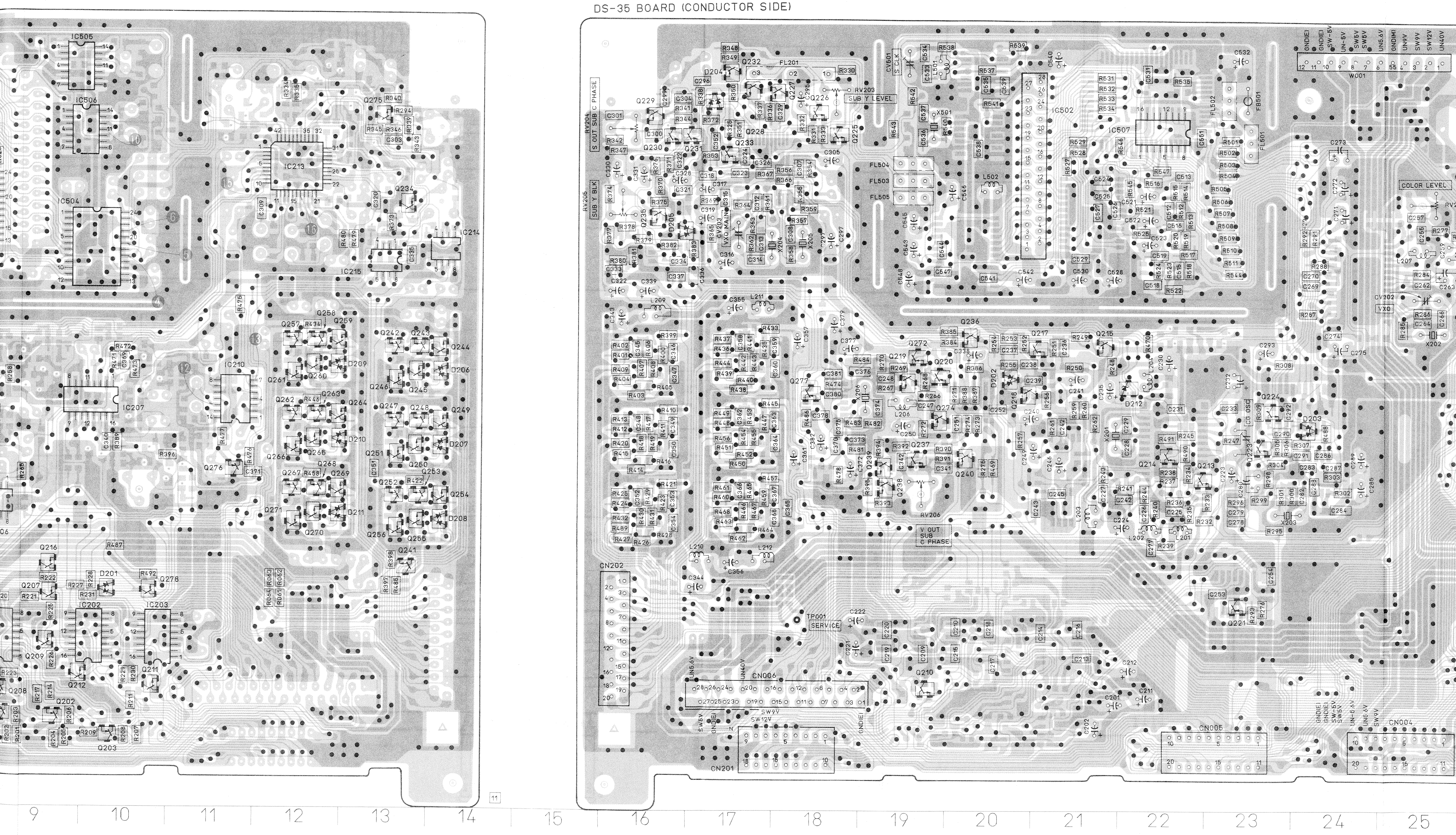
## DS-35 (DIGITAL SIGNAL PROCESS) PRINTED WIRING BOARD

– Ref. No.: DS-35 Board; 5,000 series –

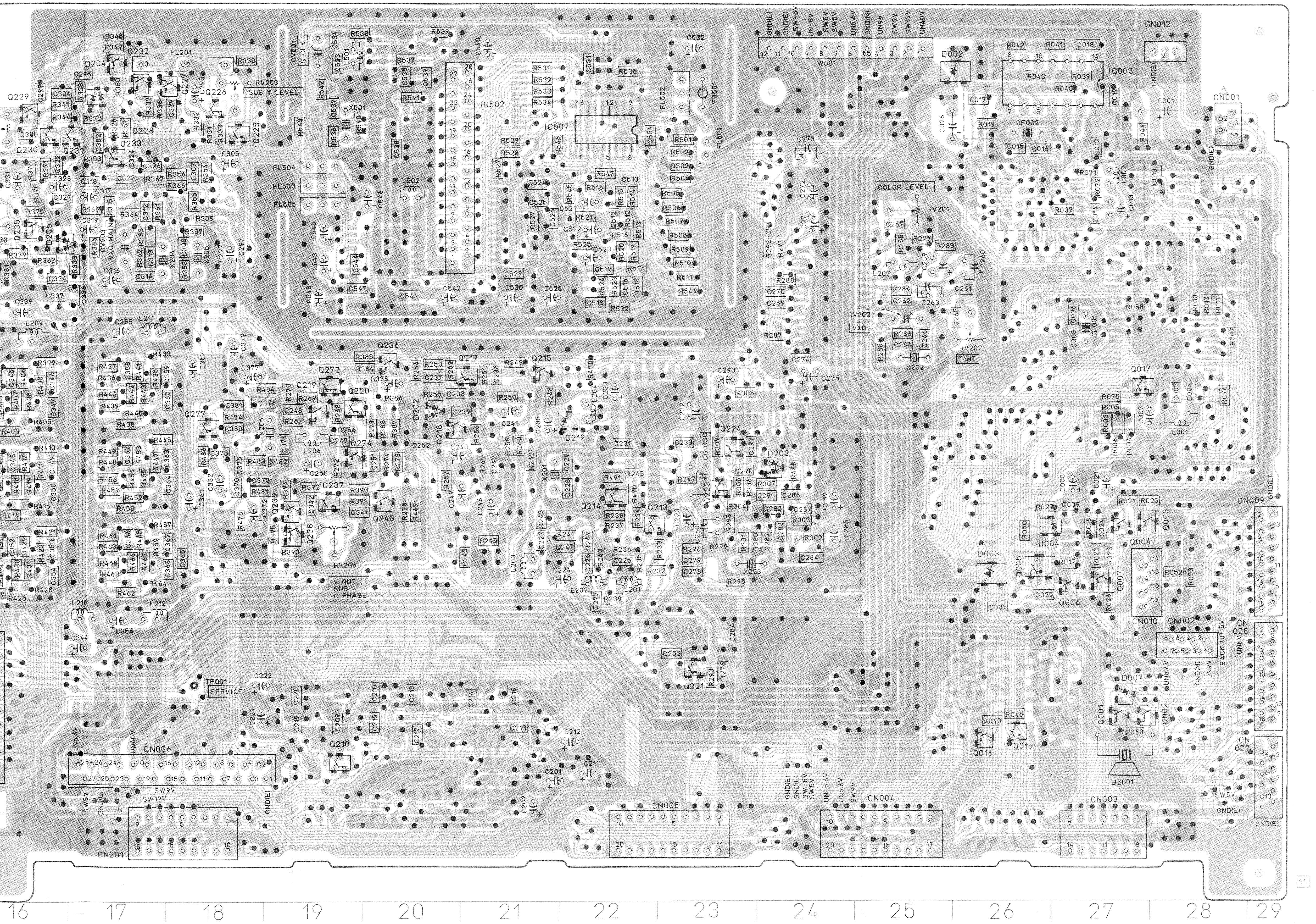
DS-35 BOARD (COMPONENT SIDE)


A
B
C
D
E
F
G
H
I
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
IC501
IC505
IC506
IC503
IC504
Q501
Q502
Q503
C514
C517
C520
R530
R526
IC004
IC002
IC001
D001
R038
R016
R015
R014
R056
IC209
R280
R278
C256
R279
R281
C258
R282
C267
C268
IC213
C309
R334
R335
Q275
R340
R294
R345
R346
R339
C383
R343
Q234
C320
R373
R480
R479
C335
IC215
IC214
R009
R008
R010
R068
R067
R069
IC212
IC211
R297
Q222
C281
L205
Q273
IC204
C276
IC205
R264
R263
C244
R265
R268
IC206
IC207
R472
R471
C369
R473
C340
R389
R396
IC210
R475
R477
R476
C371
Q276
Q258
Q257
R434
Q259
D209
Q261
Q260
Q262
R446
Q263
Q264
D210
Q266
Q265
Q268
Q267
R458
Q269
Q271
D211
Q270
Q242
Q243
Q244
D206
Q246
Q245
Q247
Q248
Q249
D207
Q251
C351
Q250
Q253
Q252
R422
Q254
D208
Q256
Q255
Q241
R398
R397
R485
R024
R025
IC005
R275
R074
R065
IC208
Q216
R487
Q207
R222
R227
R228
D201
R492
Q278
R220
R221
R231
IC201
R219
IC202
IC203
R225
Q209
R226
R224
R223
Q208
Q212
R229
R230
Q211
R217
R214
Q202
Q201
R203
R202
R201
R204
R205
R206
R209
Q203
R208
R207
R211
R064
R063
R061
R062
11
RV204
S OUT SUB C PHASE
RV206
SUB Y BLK
D

DS-35 BOARD (CONDUCTOR SIDE)


IC505
IC506
IC504
IC213
IC214
IC215
IC210
IC207
IC202
IC203
IC502
IC507
CN202
CN006
CN201
CN005
CN004
W001
RV203 SUB Y LEVEL
RV204 S OUT SUB C PHASE
RV205 SUB Y BLK
RV206 V OUT SUB C PHASE
CV202 VXO
CV501 S CLK
VXO MAIN
COLOR LEVEL
TP001 SERVICE
FL201
FL501
FL502
FL503
FL504
FL505
FB501
X501
X201
X202
X203
X204
X205
GND(E)
SW-5V
UN-5V
SW5V
SW6V
UN5.6V
GND(M)
UN9V
SW9V
SW12V
UN40V
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

## BOARD (CONDUCTOR SIDE)

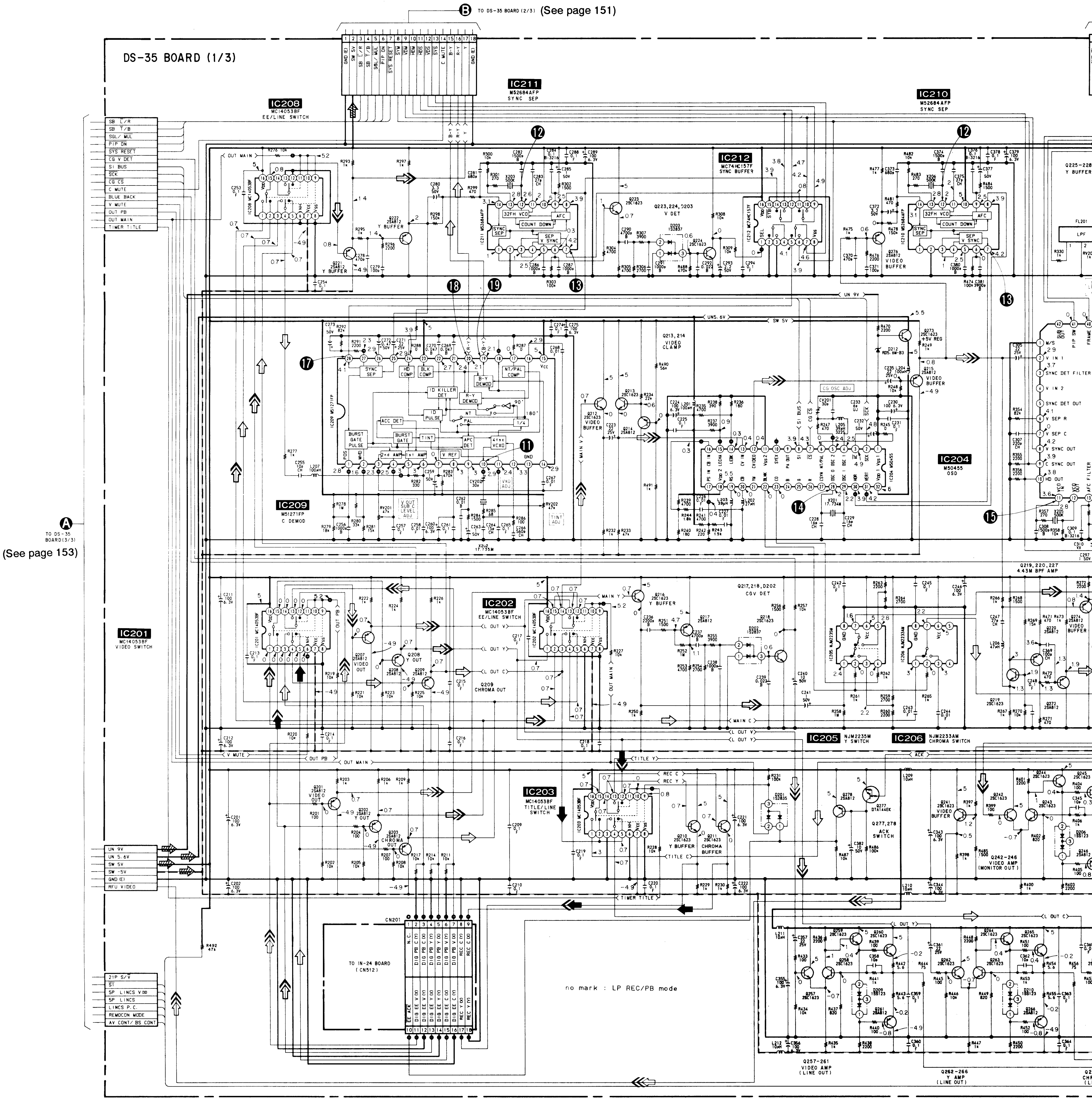

SUB Y LEVEL
RV203
S CLK
CV601
IC502
IC507
FL501
FL502
FB501
FL503
FL504
FL505
L502
X501
COLOR LEVEL
RV201
CV202
VXO
X202
RV202
TINT
W001
GND(E)
SW-6V
UN-5V
SW5V
UN5.6V
GND(M)
UN9V
SW9V
SW12V
UN40V
AEP MODEL
CN012
IC003
CF002
CN001
CF001
D002
Q017
L001
D003
D004
Q004
Q005
Q006
Q007
CN009
CN010
CN002
BACK UP 5V
CN 008
D007
Q001
Q002
Q015
Q016
BZ001
CN 007
SW5V
CN003
CN004
CN005
CN006
CN201
SW12V
SW9V
TP001
SERVICE
V OUT
SUB
C PHASE
RV206
X203
X201
CG OSC
D203
D212
Q210
Q221
Q224
Q236
Q272
Q219
Q220
Q217
Q215
Q277
Q274
Q237
Q239
Q238
Q240
Q214
Q213
D202
Q218
L206
L209
L210
L211
L212
L201
L202
L203
Q229
Q230
Q231
Q232
Q233
Q226
Q227
Q228
Q225
D204
D205
Q235
FL201
VXO MAIN
CV203
X204
X205
11
16
17
18
19
20
21
22
23
24
25
26
27
28
29

DS-35 BOARD

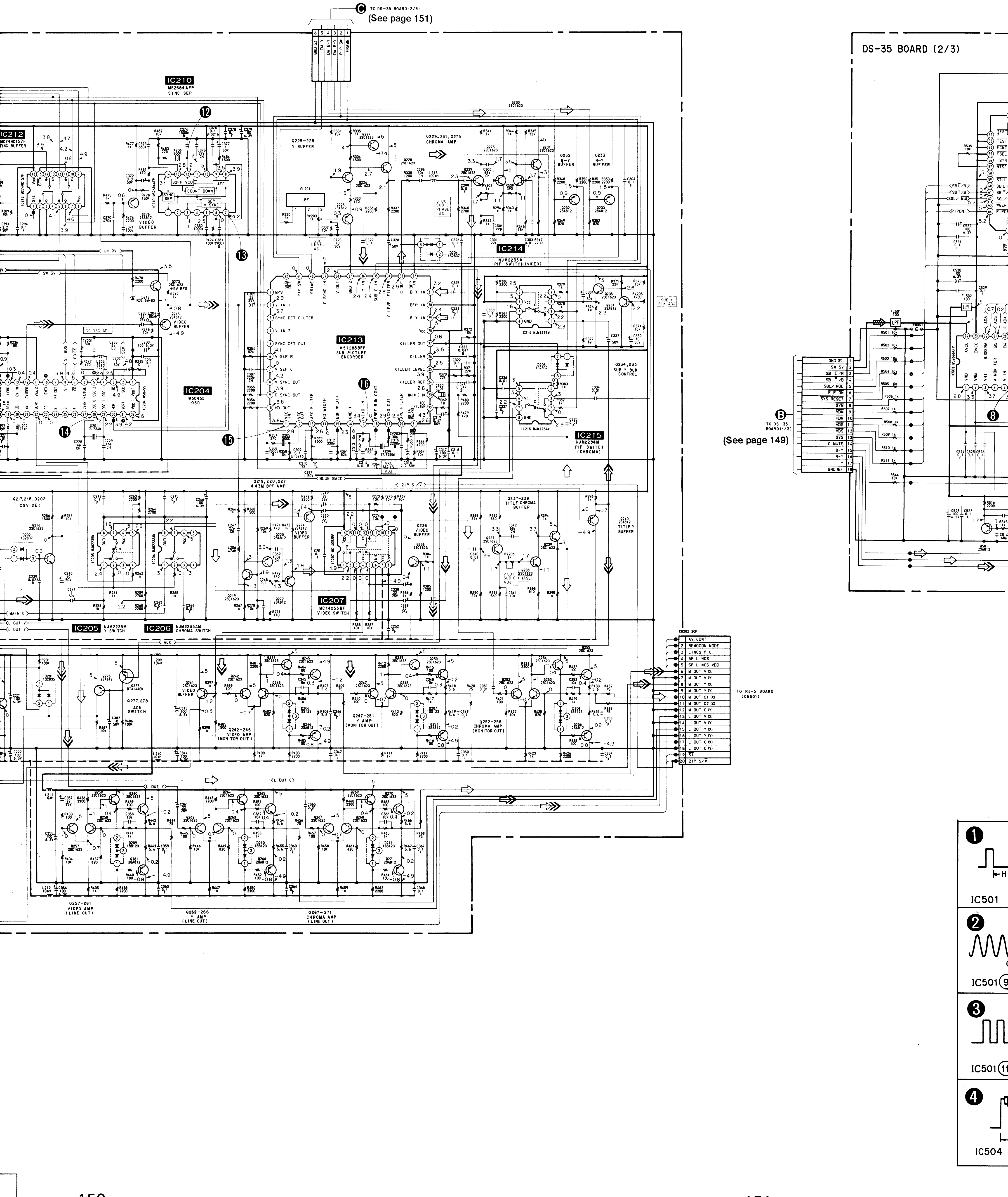
| | |
|---|---|
| D001 | B-3 |
| D002 | A-25 (AEP model) |
| D003 | F-26 (AEP model) |
| D004 | F-26 |
| D007 | G-27 |
| D201 | G-10 |
| D202 | E-20 |
| D203 | E-24 |
| D204 | A-17 |
| D205 | C-16 |
| D206 | E-14 |
| D207 | E-14 |
| D208 | F-14 |
| D209 | E-13 |
| D210 | E-13 |
| D211 | F-13 |
| D212 | E-22 |
| IC001 | D-2 |
| IC002 | B-3 |
| IC003 | A-27 |
| IC004 | B-2 |
| IC005 | F-3 |
| IC201 | G-9 |
| IC202 | H-10 |
| IC203 | H-10 |
| IC204 | F-7 |
| IC205 | E-8 |
| IC206 | F-9 |
| IC207 | E-10 |
| IC208 | G-6 |
| IC209 | C-5 |
| IC210 | E-11 |
| IC211 | F-6 |
| IC212 | E-6 |
| IC213 | B-12 |
| IC214 | C-14 |
| IC215 | C-13 |
| IC501 | A-8 |
| IC502 | B-21 |
| IC503 | C-8 |
| IC504 | C-10 |
| IC505 | A-10 |
| IC506 | B-10 |
| IC507 | B-22 |
| Q001 | H-27 |
| Q002 | H-28 |
| Q003 | F-28 |
| Q004 | F-27 |
| Q005 | F-26 |
| Q006 | F-27 |
| Q007 | F-27 |
| Q015 | H-26 |
| Q016 | H-26 |
| Q017 | D-27 |
| Q201 | I-9 |
| Q202 | I-9 |
| Q203 | I-10 |
| Q207 | G-9 |
| Q208 | H-9 |
| Q209 | H-9 |
| Q210 | H-19 |
| Q211 | H-10 |
| Q212 | H-10 |
| Q213 | F-23 |
| Q214 | F-22 |
| Q215 | D-21 |
| Q216 | G-9 |
| Q217 | D-21 |
| Q218 | E-20 |
| Q219 | E-19 |
| Q220 | E-19 |
| Q221 | G-23 |
| Q222 | F-6 |
| Q223 | E-23 |
| Q224 | E-23 |
| Q225 | B-18 |
| Q226 | B-18 |
| Q227 | A-18 |
| Q228 | A-17 |
| Q229 | B-16 |
| Q230 | B-16 |
| Q231 | B-17 |
| Q232 | A-17 |
| Q233 | B-17 |
| Q234 | C-13 |
| Q235 | C-16 |
| Q236 | D-20 |
| Q237 | F-19 |
| Q238 | F-19 |
| Q239 | F-19 |
| Q240 | F-20 |
| Q241 | G-13 |
| Q242 | D-13 |
| Q243 | D-13 |
| Q244 | D-14 |
| Q245 | E-13 |
| Q246 | E-13 |
| Q247 | E-13 |
| Q248 | E-13 |
| Q249 | E-14 |
| Q250 | E-13 |
| Q251 | F-13 |
| Q252 | F-13 |
| Q253 | F-13 |
| Q254 | F-14 |
| Q255 | F-13 |
| Q256 | F-13 |
| Q257 | D-12 |
| Q258 | D-12 |
| Q259 | D-13 |
| Q260 | E-12 |
| Q261 | E-12 |
| Q262 | E-12 |
| Q263 | E-12 |
| Q264 | E-13 |
| Q265 | E-12 |
| Q266 | F-12 |
| Q267 | F-12 |
| Q268 | F-12 |
| Q269 | F-12 |
| Q270 | F-12 |
| Q271 | F-12 |
| Q272 | D-19 |
| Q273 | E-7 |
| Q274 | E-19 |
| Q275 | B-13 |
| Q276 | F-11 |
| Q277 | E-18 |
| Q278 | G-10 |
| Q501 | B-7 |
| Q502 | C-7 |
| Q503 | C-7 |

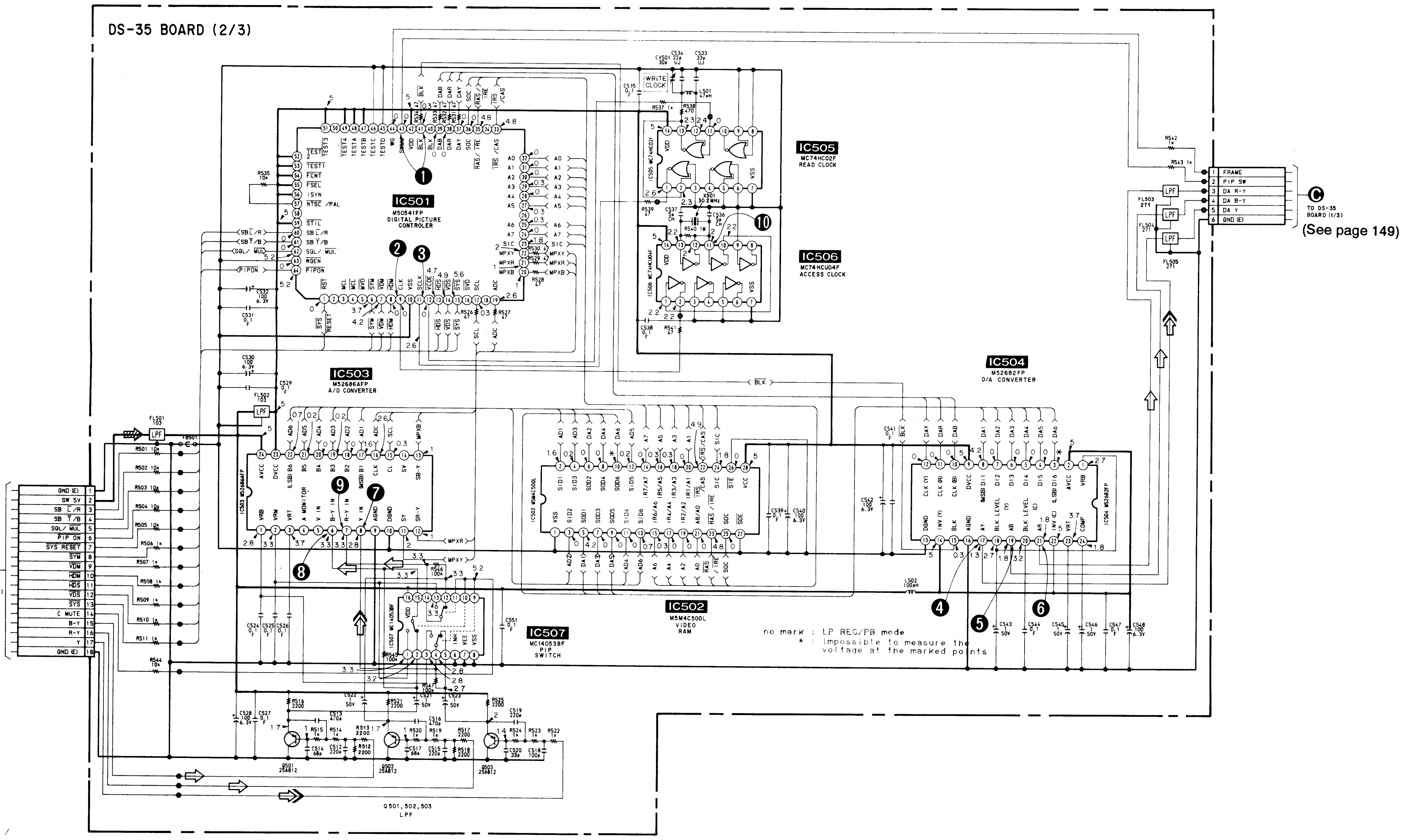
## DS-35 (DIGITAL SIGNAL PROCESS) SCHEMATIC DIAGRAMS (1/3), (2/3)

– Ref. No.: DS-35 Board; 5,000 series –

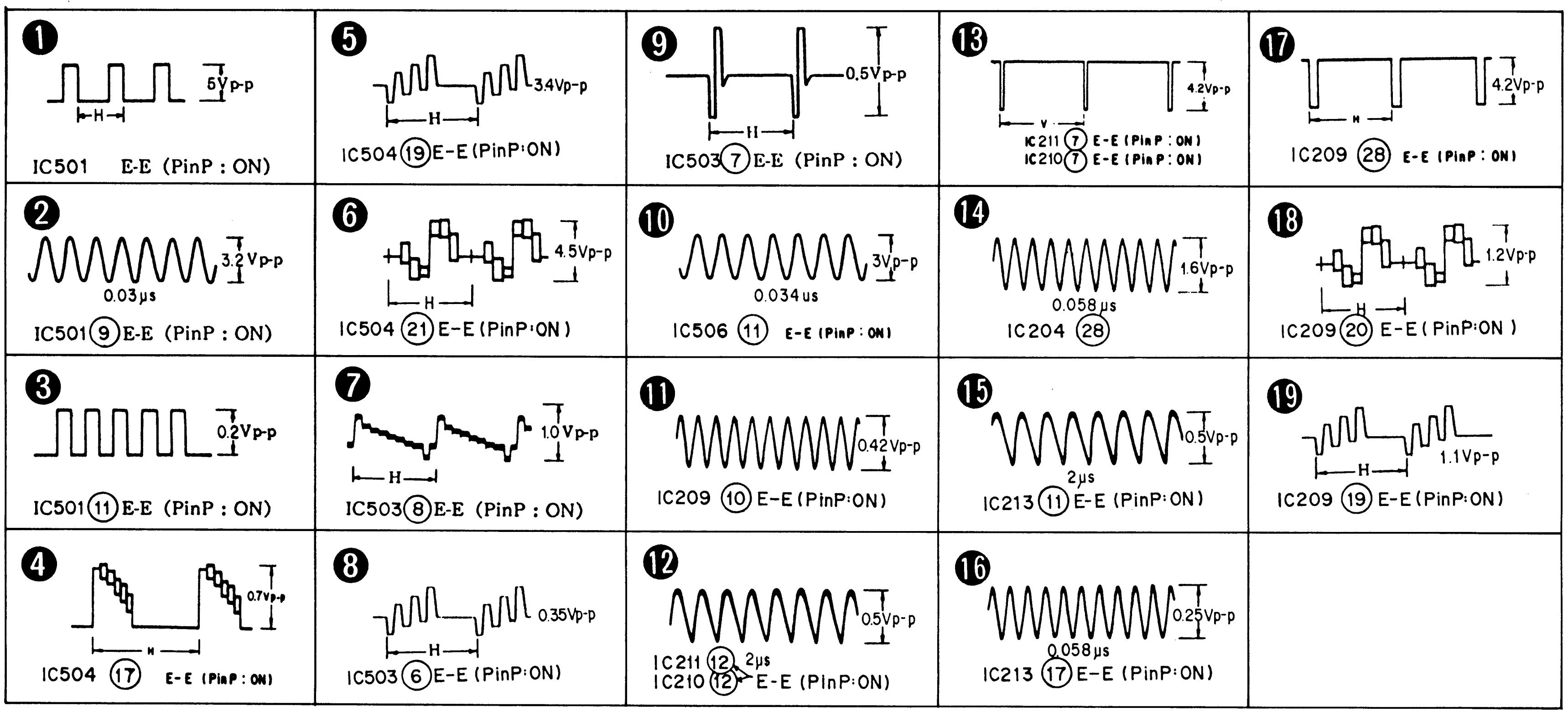


Ⓑ TO DS-35 BOARD (2/3) (See page 151)
DS-35 BOARD (1/3)
IC208 MC14053BF EE/LINE SWITCH
IC211 M52684AFP SYNC SEP
IC212 MC74HC157F SYNC BUFFER
IC210 M52684AFP SYNC SEP
IC209 M51271FP C DEMOD
IC204 M50455 OSD
IC201 MC14053BF VIDEO SWITCH
IC202 MC14053BF EE/LINE SWITCH
IC203 MC14053BF TITLE/LINE SWITCH
IC205 NJM2235M Y SWITCH
IC206 NJM2233AM CHROMA SWITCH
Ⓐ TO DS-35 BOARD (3/3) (See page 153)
SB L/R
SB T/B
SGL/MUL
PIP ON
SYS RESET
CG V DET
S1 BUS
SCK
CG CS
C MUTE
BLUE BACK
V MUTE
OUT PB
OUT MAIN
TIMER TITLE
UN 9V
UN 5.6V
SW 5V
SW -5V
GND (E)
RFU VIDEO
21P S/V
S1
SP LINCS V DD
SP LINCS
LINCS P.C
REMOCON MODE
AV CONT/BS CONT
CN201
TO IN-24 BOARD (CN512)
no mark : LP REC/PB mode
Q221 2SA812 Y BUFFER
Q222 2SA812 Y BUFFER
Q223,224,D203 V DET
Q213,214 VIDEO CLAMP
Q212 2SC1623 VIDEO BUFFER
Q215 2SA812 VIDEO BUFFER
Q273 2SC1623 +5V REG
Q271 2SA812 VIDEO BUFFER
Q225-228 Y BUFFER
Q216 2SC1623 Y BUFFER
Q217,218,D202 CGV DET
Q219,220,227 4.43M BPF AMP
Q207 2SA812 VIDEO OUT
Q208 Y OUT
Q209 CHROMA OUT
Q201 2SA812 VIDEO OUT
Q202 2SA812 Y OUT
Q203 2SA812 CHROMA OUT
Q210 2SC1623 Y BUFFER
Q211 2SC1623 CHROMA BUFFER
Q277,278 ACK SWITCH
Q241 2SC1623 VIDEO BUFFER
Q242-246 VIDEO AMP (MONITOR OUT)
Q257-261 VIDEO AMP (LINE OUT)
Q262-266 Y AMP (LINE OUT)
X201 17.734M
X202 17.734M
V OUT SUB C LEVEL ADJ
TINT ADJ
VXO ADJ
CG OSC ADJ


TO DS-35 BOARD (2/3)
(See page 151)
GND (E)
DA Y
DA B-Y
DA R-Y
PIP SW
FRAME
IC210
M52684AFP
SYNC SEP
IC212
MC74HC157F
SYNC BUFFER
32FH VCO
COUNT DOWN
AFC
SEP
V SYNC
SYNC SEP
Q225-228
Y BUFFER
FL201
LPF
Q229-231, Q275
CHROMA AMP
Q232
B-Y
BUFFER
Q233
R-Y
BUFFER
S OUT
SUB C
PHASE
ADJ
SUB
LEVEL
ADJ
IC214
NJM2235M
PIP SWITCH (VIDEO)
SUB Y
BLK ADJ
Q273
+5V REG
Q215
VIDEO
BUFFER
CG OSC ADJ
IC213
M51286BFP
SUB PICTURE
ENCODER
M/S
V IN 1
SYNC DET FILTER
V IN 2
SYNC DET OUT
V SEP R
V SEP C
V SYNC OUT
C SYNC OUT
HD OUT
B-Y IN
BFP IN
R-Y IN
KILLER OUT
KILLER
KILLER LEVEL
KILLER REF
MAIN C IN
AFC FILTER
IC204
M50455
OSD
Q234,235
SUB Y BLK
CONTROL
IC215
NJM2234M
PIP SWITCH
(CHROMA)
VXO
MAIN
ADJ
BLUE BACK
Q219, 220, 227
4.43M BPF AMP
21P S/V
Q217, 218, D202
CGV DET
Q236
VIDEO
BUFFER
Q237-239
TITLE CHROMA
BUFFER
Q240
TITLE Y
BUFFER
V OUT
SUB C PHASE
ADJ
IC205 NJM2235M Y SWITCH
IC206 NJM2233AM CHROMA SWITCH
IC207
MC14053BF
VIDEO SWITCH
MAIN C
L OUT Y
ACK
Q277, 278
ACK
SWITCH
Q241
VIDEO
BUFFER
Q242-246
VIDEO AMP
(MONITOR OUT)
Q247-251
Y AMP
(MONITOR OUT)
Q252-256
CHROMA AMP
(MONITOR OUT)
CN202 20P
1 AV. CONT
2 REMOCON MODE
3 LINCS P.C.
4 SP LINCS
5 SP LINCS VDD
6 M OUT V (X)
7 M OUT Y (X)
8 M OUT V (X)
9 M OUT Y (Y)
10 M OUT C1 (X)
11 M OUT C2 (X)
12 M OUT C (Y)
13 L OUT V (X)
14 L OUT Y (Y)
15 L OUT Y (X)
16 L OUT Y (Y)
17 L OUT C (X)
18 L OUT C (Y)
19 ST
20 21P S/V
TO RJ-5 BOARD
(CN501)
L OUT C
Q257-261
VIDEO AMP
(LINE OUT)
Q262-266
Y AMP
(LINE OUT)
Q267-271
CHROMA AMP
(LINE OUT)
DS-35 BOARD (2/3)
TO DS-35
BOARD (1/3)
(See page 149)
GND (E)
SW 5V
SB L/R
SB T/B
SGL/MUL
PIP ON
SYS RESET
SYM
VDM
HDM
HDS
VDS
SYS
C MUTE
B-Y
R-Y
Y
GND (E)
LPF
IC501
IC501 ⑨
IC501 ⑪
IC504

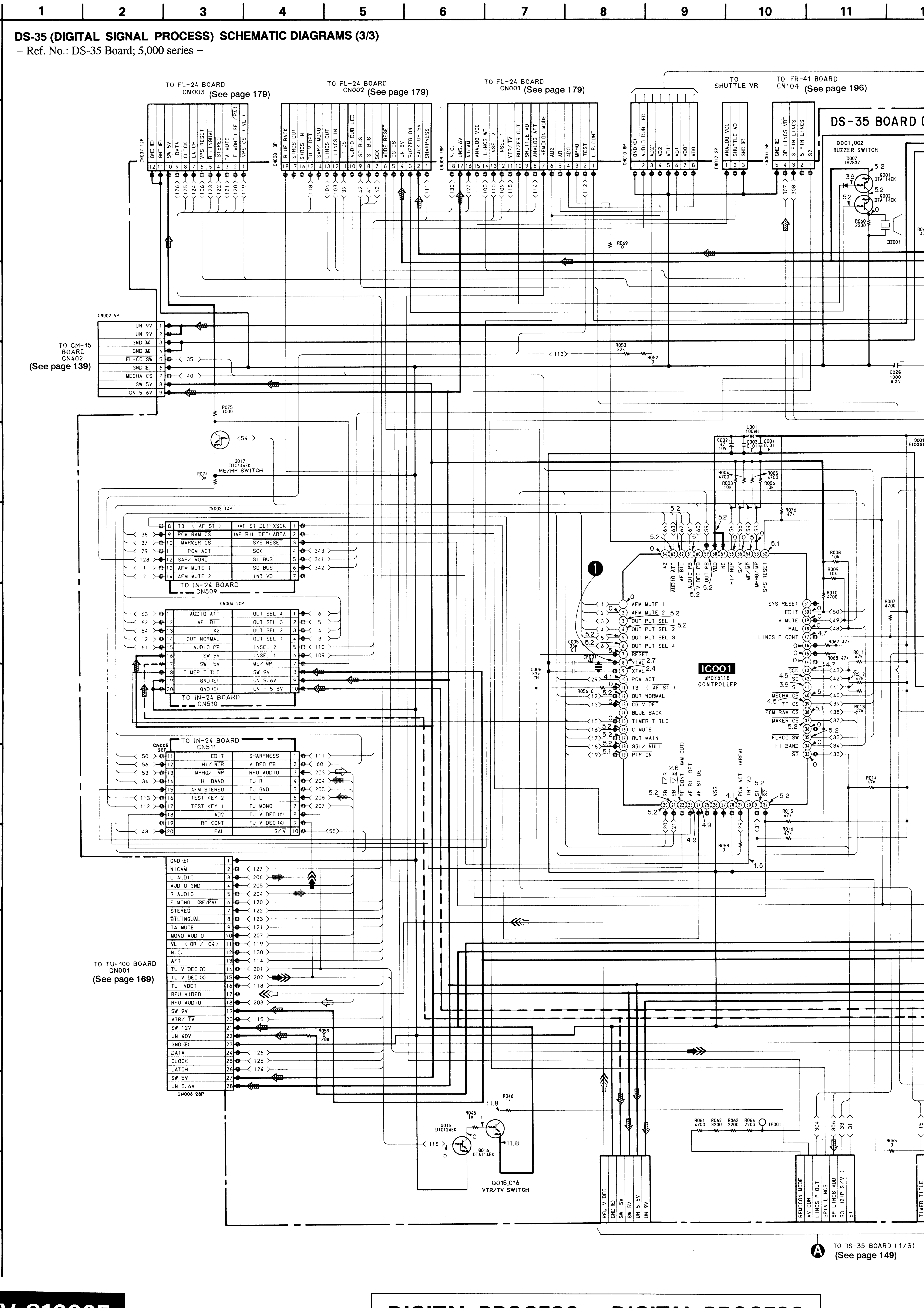

DS-35 BOARD (2/3)
IC501
M50541FP
DIGITAL PICTURE CONTROLER
IC502
M5M4C500L
VIDEO RAM
IC503
M52686AFP
A/D CONVERTER
IC504
M52682FP
D/A CONVERTER
IC505
MC74HC02F
READ CLOCK
IC506
MC74HCU04F
ACCESS CLOCK
IC507
MC14053BF
PIP SWITCH
Q501, 502, 503
LPF
WRITE CLOCK
FRAME
PIP SW
DA R-Y
DA B-Y
DA Y
GND (E)
TO DS-35 BOARD (1/3)
(See page 149)
GND (E)
SW 5V
SB L/R
SB T/B
SGL/ MUL
PIP ON
SYS RESET
SYM
VDM
HDM
HDS
VDS
SYS
C MUTE
B-Y
R-Y
Y
GND (E)
DS-35 BOARD (1/3)
149)
no mark : LP REC/PB mode
* : Impossible to measure the voltage at the marked points
A
B
C
D
E
F
G
H
I

| | VIDEO SIGNAL | | | |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| REC | ➡ | ➡➡ | | |
| PB | ⇨ | ⇨⇨ | ⇨⇨⇨ | |



## DS-35 (DIGITAL SIGNAL PROCESS) SCHEMATIC DIAGRAMS (3/3)

– Ref. No.: DS-35 Board; 5,000 series –



1
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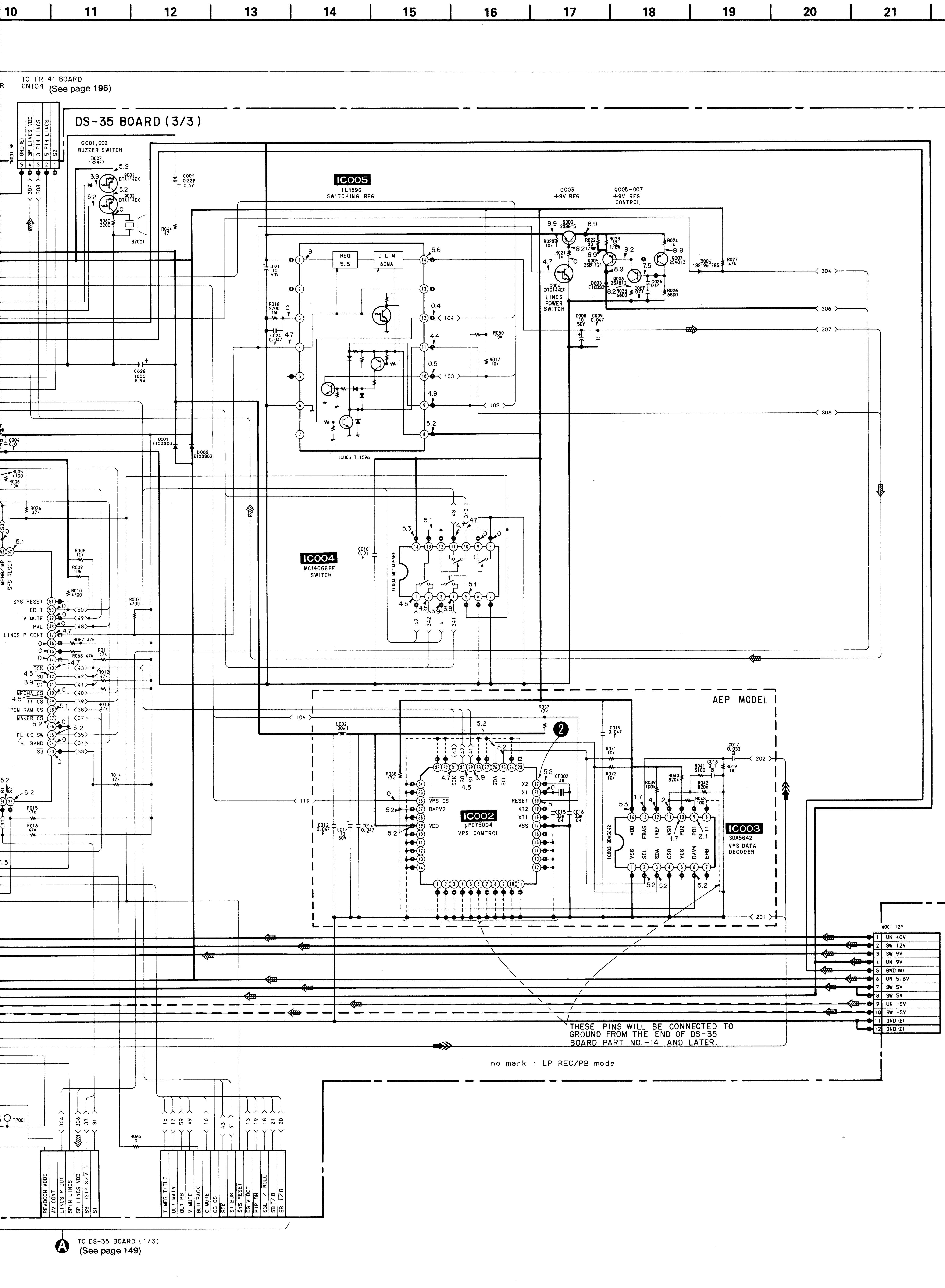
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
TO FL-24 BOARD CN003 (See page 179)
CN007 12P
GND (E)
GND (E)
SW 5V
DATA
CLOCK
LATCH
VPS RESET
BILINGUAL
STEREO
TA MUTE
F MONO ( SE /PA )
VPS CS ( VL )
TO FL-24 BOARD CN002 (See page 179)
CN008 18P
BLUE BACK
SIRCS OUT
SIRCS IN
TU V DET
SAP/ MONO
LINCS OUT
LINCS IN
TT CS
AUDIO DUB LED
SO BUS
SI BUS
SCK
MODE RESET
CG CS
UN 5V
BUZZER ON
BACK UP 5V
SHARPNESS
TO FL-24 BOARD CN001 (See page 179)
CN009 18P
N.C.
UNS.6V
NICAM
ANALOG VCC
LINCS WP
INSEL 2
INSEL 1
VTR/TV
BUZZER OUT
SHUTTLE AD
ANALOG AFT
REMOCON MODE
AD2
AD1
AD0
MPHG
TEST 1
L.P.CONT
CN010 8P
GND (E)
AUDIO DUB LED
AD2'
AD2
AD1'
AD1
AD0'
AD0
TO SHUTTLE VR
CN012 3P
ANALOG VCC
SHUTTLE AD
GND (E)
TO FR-41 BOARD CN104 (See page 196)
CN001 5P
GND (E)
3P LINCS VDD
3 PIN LINCS
5 PIN LINCS
S2
DS-35 BOARD
Q001,002 BUZZER SWITCH
D007 1S2837
Q001 DTA114EK
Q002 DTA114EK
R060 2200
BZ001
R069 0
CN002 9P
TO CM-15 BOARD CN402 (See page 139)
UN 9V
UN 9V
GND (M)
GND (M)
FL+CC SW
GND (E)
MECHA CS
SW 5V
UN 5.6V
R053 22k
R052 0
C026 1000 6.3V
R075 1000
Q017 DTC144EK ME/MP SWITCH
R074 10k
L001 100µH
C002 47 10V
C003 0.01 F
C004 0.01 F
R004 4700
R003 10k
R005 4700
R006 10k
R076 47k
CN003 14P
T3 ( AF ST )
PCM RAM CS
MARKER CS
PCM ACT
SAP/ MONO
AFM MUTE 1
AFM MUTE 2
(AF ST DET) XSCK
(AF BIL DET) AREA
SYS RESET
SCK
SI BUS
SO BUS
INT VD
TO IN-24 BOARD CN509
CN004 20P
AUDIO ATT
AF BIL
X2
OUT NORMAL
AUDIO PB
SW 5V
SW -5V
TIMER TITLE
GND (E)
GND (E)
OUT SEL 4
OUT SEL 3
OUT SEL 2
OUT SEL 1
INSEL 2
INSEL 1
ME/ MP
SW 9V
UN 5.6V
UN - 5.6V
TO IN-24 BOARD CN510
CN005 20P
TO IN-24 BOARD CN511
EDIT
HI/ NOR
MPHG/ MP
HI BAND
AFM STEREO
TEST KEY 2
TEST KEY 1
AD2
RF CONT
PAL
SHARPNESS
VIDEO PB
RFU AUDIO
TU R
TU GND
TU L
TU MONO
TU VIDEO (Y)
TU VIDEO (X)
S/ V
TO TU-100 BOARD CN001 (See page 169)
CN006 28P
GND (E)
NICAM
L AUDIO
AUDIO GND
R AUDIO
F MONO (SE/PA)
STEREO
BILINGUAL
TA MUTE
MONO AUDIO
VL (OR / C4)
N.C.
AFT
TU VIDEO (Y)
TU VIDEO (X)
TU VDET
RFU VIDEO
RFU AUDIO
SW 9V
VTR/ TV
SW 12V
UN 40V
GND (E)
DATA
CLOCK
LATCH
SW 5V
UN 5.6V
R059 0 1/8W
IC001 uPD75116 CONTROLLER
CF001 4M
C005 33p CH
C006 33p CH
R056 0
AFM MUTE 1
AFM MUTE 2
OUT PUT SEL 1
OUT PUT SEL 2
OUT PUT SEL 3
OUT PUT SEL 4
RESET
XTAL
XTAL
PCM ACT
T3 ( AF ST )
OUT NORMAL
CG V DET
BLUE BACK
TIMER TITLE
C MUTE
OUT MAIN
SQL/ NULL
PIP ON
AUDIO ATT
AF BIL
AUDIO PB
VIDEO PB
OUT PB
VDD
NC
HI/ NOR
S/V
ME/ MP
MPHG/ MP
SYS RESET
SYS RESET
EDIT
V MUTE
PAL
LINCS P CONT
SCK
SO
SI
MECHA CS
TT CS
PCM RAM CS
MAKER CS
FL+CC SW
HI BAND
S3
SB
SB
RF CONT
AF BIL DET
AF ST DET
VSS
PCM ACT
INT VD
S1
S2
R008 10k
R009 10k
R010 4700
R007 4700
R067 47k
R068 47k
R011 47k
R012 47k
R013 47k
R014 47k
R015 47k
R016 47k
R058 0
Q015 DTC124EK
Q016 DTA114EK
R045 1k
R046 1k
Q015,016 VTR/TV SWITCH
RFU VIDEO
GND (E)
SW -5V
SW 5V
UN 5.6V
UN 9V
R061 4700
R062 3300
R063 2200
R064 2200
TP001
REMOCON MODE
AV CONT
LINCS P OUT
5PIN LINCS
5P LINCS VDD
S3 (21P S/V)
S1
R065 0
TIMER TITLE
TO DS-35 BOARD (1/3) (See page 149)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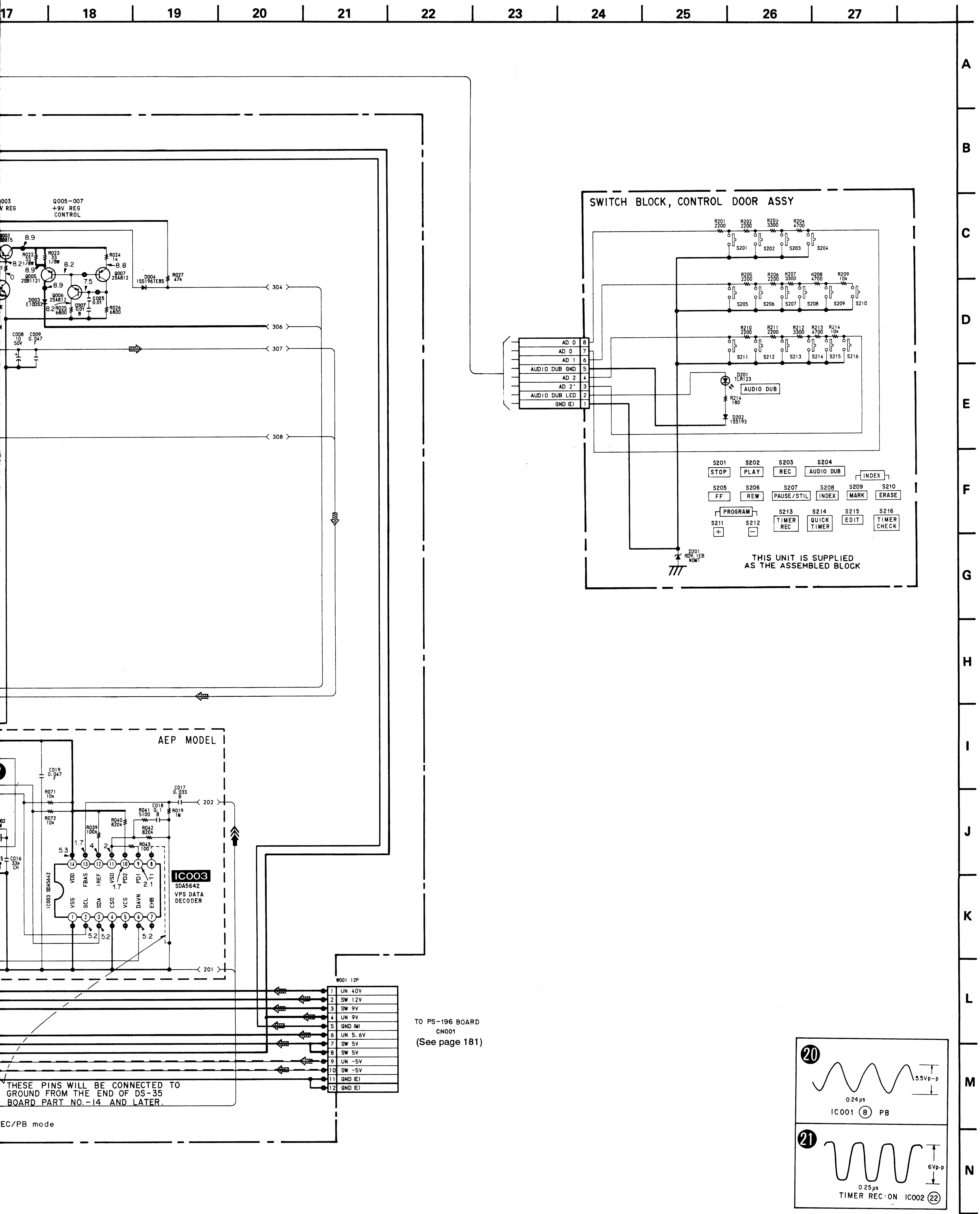
21
TO FR-41 BOARD CN104 (See page 196)
DS-35 BOARD (3/3)
CN001 5P
GND (E)
3P LINCS VDD
3 PIN LINCS
5 PIN LINCS
S2
Q001,002 BUZZER SWITCH
D007 1S2837
Q001 DTA114EK
Q002 DTA114EK
R060 2200
BZ001
R044 47
C001 0.22F 5.5V
IC005
TL1596
SWITCHING REG
REG 5.5
C LIM 60MA
C021 10 50V
R018 2700 1M
C024 0.047 F
C026 1000 6.3V
IC005 TL1596
R050 10k
R017 10k
104
103
105
Q003 +9V REG
Q005-007 +9V REG CONTROL
Q003 2SB815
R020 10k
R021 1k
R022 33 1/8W
R023 33 1/8W
R024 1k
Q004 DTC144EK
LINCS POWER SWITCH
Q005 2SB1121
Q006 2SA812
Q007 2SA812
D003 E10DS2
R025 6800
C007 0.01 B
C025 0.01
R026 6800
D004 1SS196TE85
R027 47k
C008 10 50V
C009 0.047 F
304
306
307
308
D001 E10QS03
D002 E10QS03
C004 0.01 F
R005 4700
R006 10k
R076 47k
MPHG/MP
SYS RESET
R008 10k
R009 10k
R010 4700
R007 4700
SYS RESET
EDIT
V MUTE
PAL
LINCS P CONT
SCK
SO
SI
MECHA CS
TT CS
PCM RAM CS
MAKER CS
FL+CC SW
HI BAND
S3
R067 47k
R068 47k
R011 47k
R012 47k
R013 47k
R014 47k
R015 47k
R016 47k
IC004
MC14066BF
SWITCH
IC004 MC14066BF
C010 0.01 F
43
343
42
342
41
341
AEP MODEL
106
119
R037 47k
L002 100µH
R038 47k
C019 0.047 F
C017 0.033 B
202
R071 10k
R072 10k
R041 5100
C018 0.1 B
R019 1M
R039 100k
R040 820k
R042 820k
R043 100
IC002
µPD75004
VPS CONTROL
VPS CS
DAPV2
VDD
X2
X1
RESET
XT2
XT1
VSS
CF002 4M
C015 33p CH
C016 33p CH
C012 0.047
C013 10 50V
C014 0.047
IC003
SDA5642
VPS DATA DECODER
IC003 SDA5642
VDD
FBAS
IREF
VSO
PD2
PD1
T1
VSS
SCL
SDA
CSO
VCS
DAVN
EHB
201
W001 12P
UN 40V
SW 12V
SW 9V
UN 9V
GND (M)
UN 5.6V
SW 5V
SW 5V
UN -5V
SW -5V
GND (E)
GND (E)
TP001
R065 0
REMOCON MODE
AV CONT
LINCS P OUT
5P LINCS VDD
SP LINCS VDD
S3 (21P S/V)
S1
TIMER TITLE
OUT MAIN
OUT PB
V MUTE
BLU BACK
C MUTE
CB CS
SCK
SI BUS
SYS RESET
CB V DET
PIP ON
SBL / NULL
SB T/B
SB L/R
TO DS-35 BOARD (1/3) (See page 149)

THESE PINS WILL BE CONNECTED TO GROUND FROM THE END OF DS-35 BOARD PART NO.-14 AND LATER.

no mark : LP REC/PB mode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A
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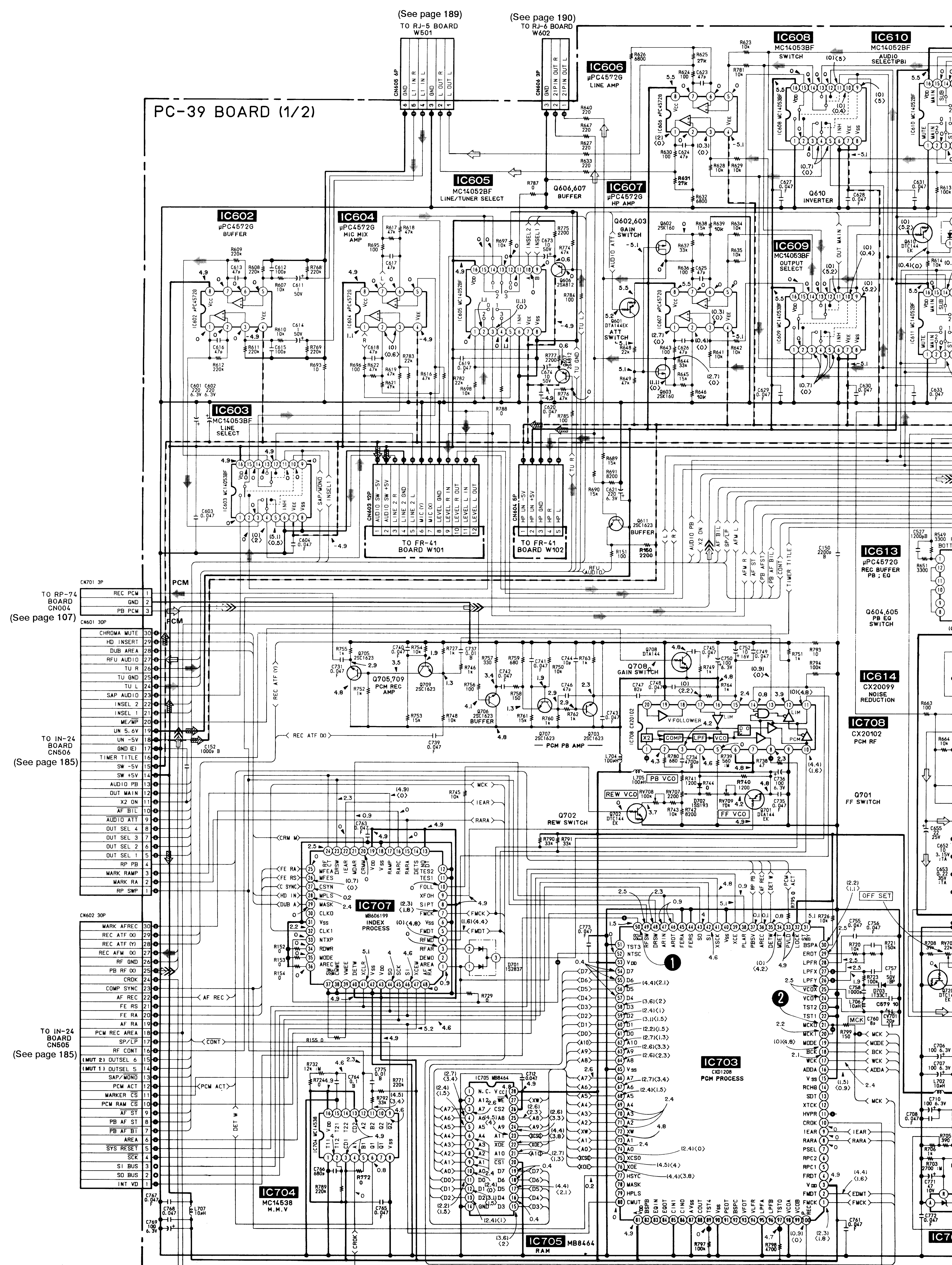
C
D
E
F
G
H
I
J
K
L
M
N
Q003
V REG
Q005-007
+9V REG
CONTROL
Q003
2SB815
8.9
R022 33
R023 33 1/8W
8.2 1/8W
8.9
Q005 2SB1121
8.2
R024 1k
8.8
Q007 2SA812
7.5
Q006 2SA812
D003 E10DS2
8.2
R025 6800
C007 0.01 B
C025 0.01
R026 6800
D004 1SS196TE85
R027 47k
C008 10 50V
C009 0.047 F
304
306
307
308
SWITCH BLOCK, CONTROL DOOR ASSY
R201 2200
R202 2200
R203 3300
R204 4700
S201
S202
S203
S204
R205 2200
R206 2200
R207 3300
R208 4700
R209 10k
S205
S206
S207
S208
S209
S210
R210 2200
R211 2200
R212 3300
R213 4700
R214 10k
S211
S212
S213
S214
S215
S216
AD 0 8
AD 0 7
AD 1 6
AUDIO DUB GND 5
AD 2 4
AD 2' 3
AUDIO DUB LED 2
GND (E) 1
D201 TLR123
AUDIO DUB
R214 180
D202 1SS193
S201 STOP
S202 PLAY
S203 REC
S204 AUDIO DUB
INDEX
S205 FF
S206 REW
S207 PAUSE/STIL
S208 INDEX
S209 MARK
S210 ERASE
PROGRAM
S211 +
S212 −
S213 TIMER REC
S214 QUICK TIMER
S215 EDIT
S216 TIMER CHECK
D201 RD9.1EB NOMT
THIS UNIT IS SUPPLIED
AS THE ASSEMBLED BLOCK
AEP MODEL
C019 0.047 F
R071 10k
R072 10k
C016 33p CH
C017 0.033 B
202
C018 0.1 B
R041 5100
R019 1M
R040 820k
R039 100k
R042 820k
R043 100
5.3
1.7
4
2
VDD
FBAS
IREF
VSO
PD2
PD1
T1
1.7
2.1
IC003 SDA5642
VSS
SCL
SDA
CSO
VCS
DAVN
EHB
5.2
5.2
5.2
IC003
SDA5642
VPS DATA
DECODER
201
W001 12P
1 UN 40V
2 SW 12V
3 SW 9V
4 UN 9V
5 GND (M)
6 UN 5.6V
7 SW 5V
8 SW 5V
9 UN -5V
10 SW -5V
11 GND (E)
12 GND (E)
TO PS-196 BOARD
CN001
(See page 181)
THESE PINS WILL BE CONNECTED TO
GROUND FROM THE END OF DS-35
BOARD PART NO.-14 AND LATER.
EC/PB mode
⑳
5.5Vp-p
0.24μs
IC001 ⑧ PB
㉑
6Vp-p
0.25μs
TIMER REC: ON IC002 ㉒

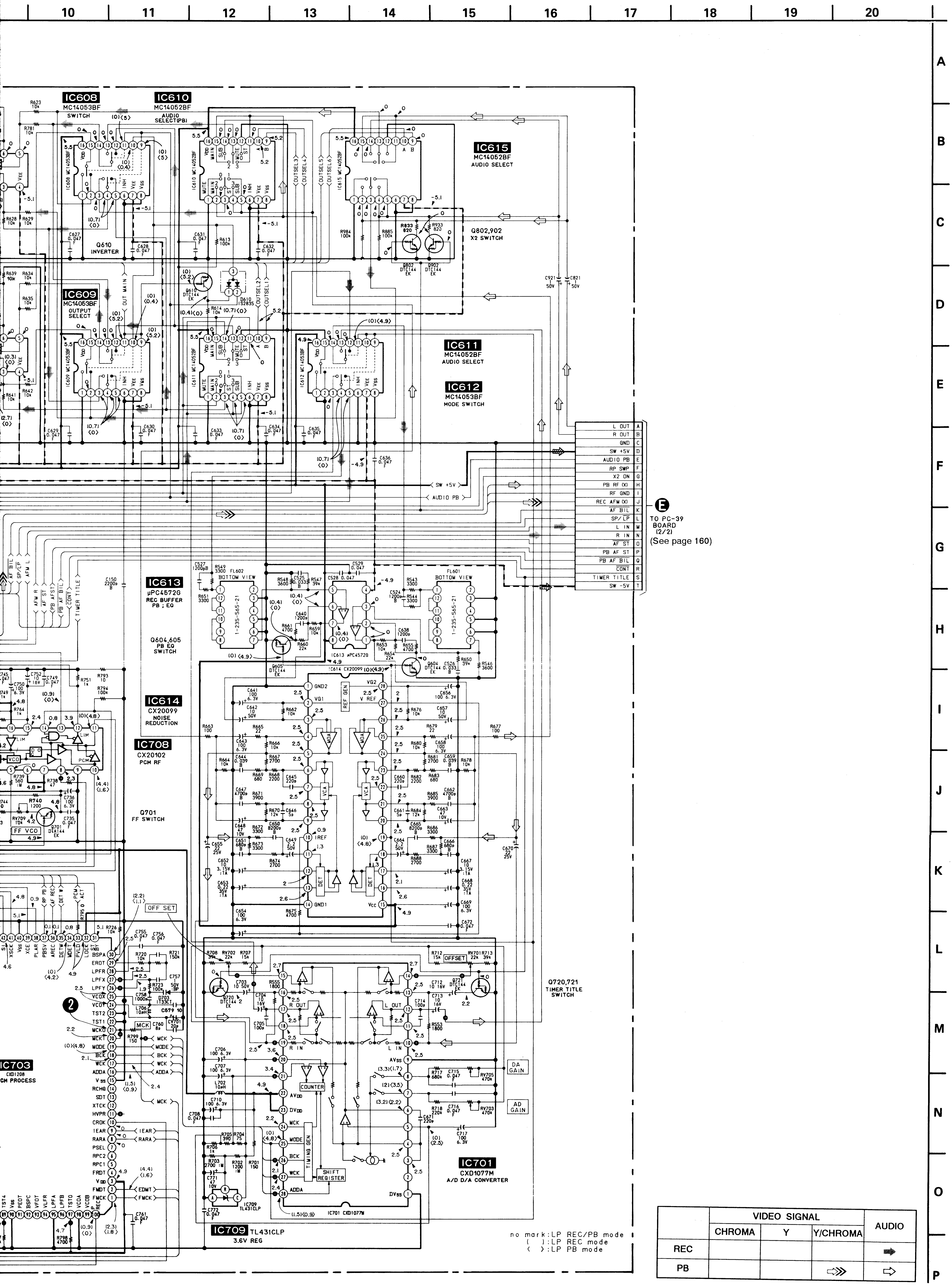
| | VIDEO SIGNAL | | | AUDIO |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| REC | | | ➾ | ➡ |
| PB | | | ⇨ | ⇨ |

## PC-39 (AUDIO SIGNAL PROCESS) SCHEMATIC DIAGRAMS (1/2)

– Ref. No.: PC-39 Board; 6,000 series –



PC-39 BOARD (1/2)
(See page 189) TO RJ-5 BOARD W501
(See page 190) TO RJ-6 BOARD W602
IC602 μPC4572G BUFFER
IC603 MC14053BF LINE SELECT
IC604 μPC4572G MIC MIX AMP
IC605 MC14052BF LINE/TUNER SELECT
IC606 μPC4572G LINE AMP
IC607 μPC4572G HP AMP
IC608 MC14053BF SWITCH
IC609 MC14053BF OUTPUT SELECT
IC610 MC14052BF AUDIO SELECT(PB)
Q606,607 BUFFER
Q602,603 GAIN SWITCH
Q601 DTA144EK ATT SWITCH
Q610 INVERTER
Q611 2SC1623 BUFFER
TO FR-41 BOARD W101
TO FR-41 BOARD W102
TO RP-74 BOARD CN004 (See page 107)
TO IN-24 BOARD CN506 (See page 185)
TO IN-24 BOARD CN505 (See page 185)
Q705,709 PCM REC AMP
Q706 2SC1623 BUFFER
Q707 2SC1623 Q703 2SC1623 PCM PB AMP
Q708 DTA144 GAIN SWITCH
IC708 CX20102 PCM RF
IC613 μPC4572G REC BUFFER PB ; EQ
Q604,605 PB EQ SWITCH
IC614 CX20099 NOISE REDUCTION
Q701 FF SWITCH
Q702 REW SWITCH
IC707 MB606199 INDEX PROCESS
IC703 CXD1208 PCM PROCESS
IC704 MC14538 M.M.V
IC705 MB8464 RAM
PCM
OFF SET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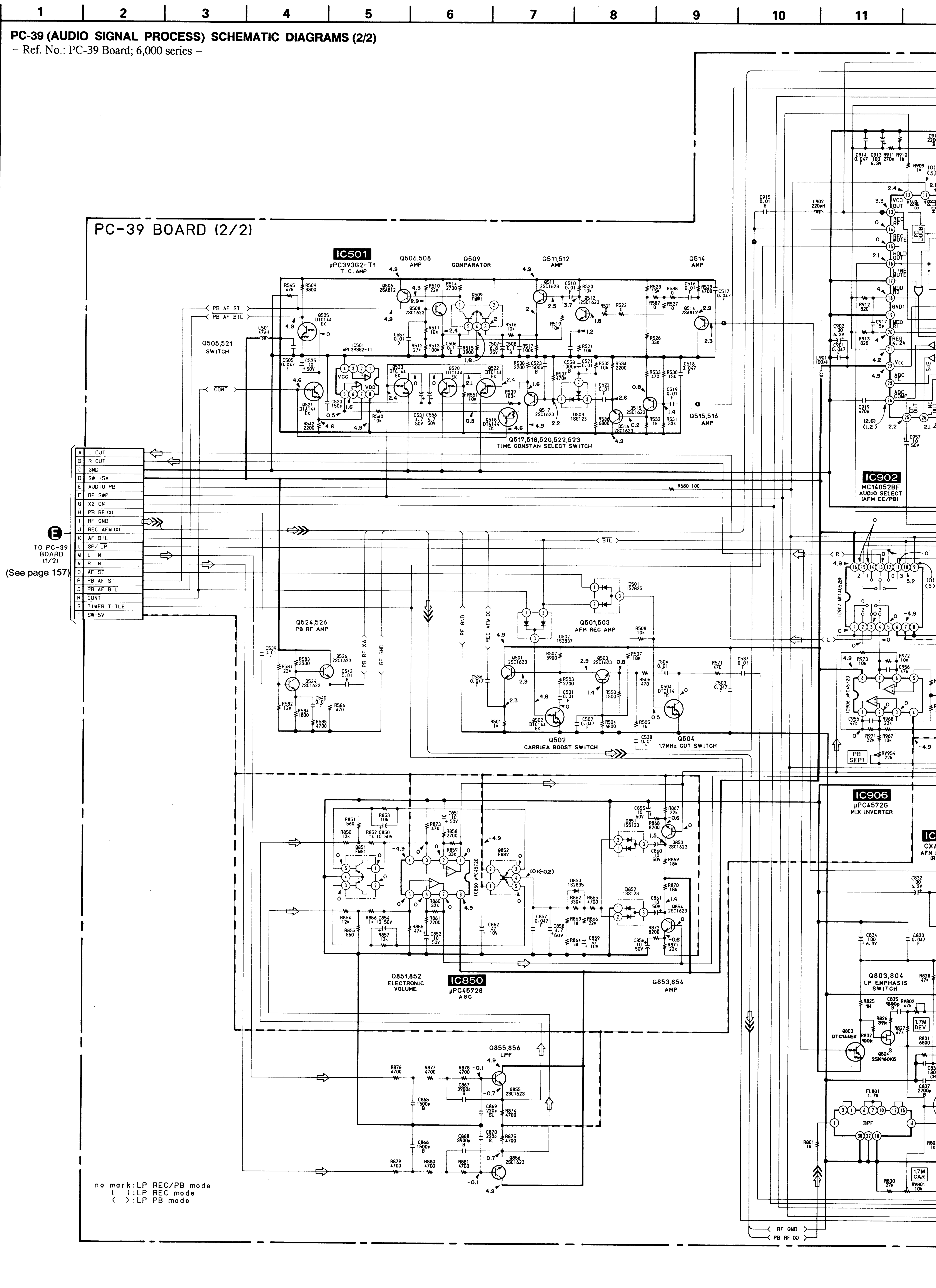
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
IC608
MC14053BF
SWITCH
IC610
MC14052BF
AUDIO SELECT(PB)
IC615
MC14052BF
AUDIO SELECT
Q802,902
X2 SWITCH
Q610
INVERTER
IC609
MC14053BF
OUTPUT SELECT
IC611
MC14052BF
AUDIO SELECT
IC612
MC14053BF
MODE SWITCH
L OUT
R OUT
GND
SW +5V
AUDIO PB
RP SWP
X2 ON
PB RF (X)
RF GND
REC AFM (X)
AF BIL
SP/LP
L IN
R IN
AF ST
PB AF ST
PB AF BIL
CONT
TIMER TITLE
SW -5V
E
TO PC-39 BOARD (2/2)
(See page 160)
IC613
μPC4572G
REC BUFFER PB ; EQ
Q604,605
PB EQ SWITCH
IC614
CX20099
NOISE REDUCTION
IC708
CX20102
PCM RF
Q701
FF SWITCH
FL602
FL601
BOTTOM VIEW
1-235-565-21
REF GEN
VDA
VCA
DET
IREF
GND1
GND2
OFF SET
OFFSET
Q720,721
TIMER TITLE SWITCH
DA GAIN
AD GAIN
COUNTER
TIMING GEN
SHIFT REGISTER
IC701
CXD1077M
A/D D/A CONVERTER
IC709 TL431CLP
3.6V REG
IC703
CXD1208
PCM PROCESS
FF VCO
VCO
MCK
2

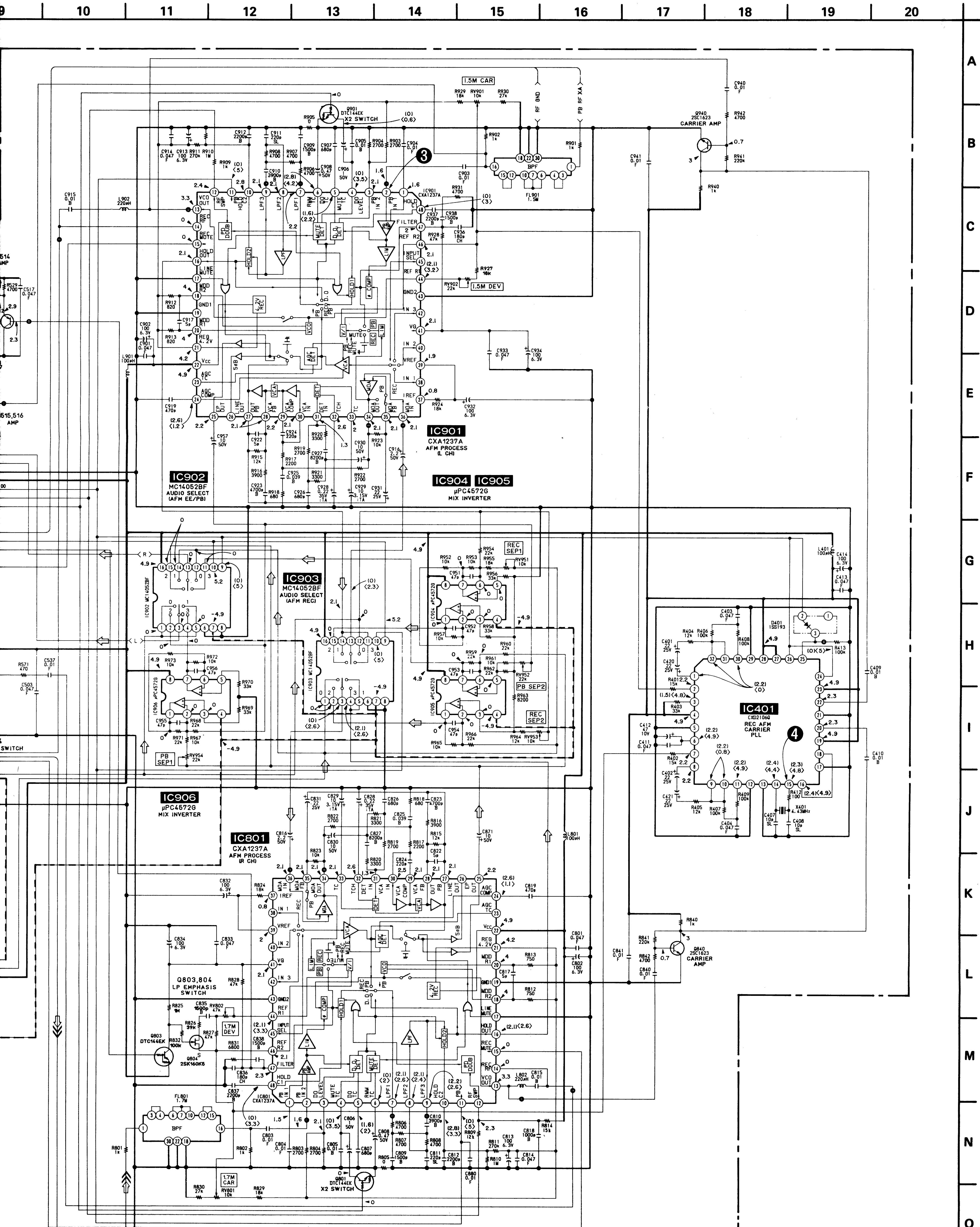
no mark:LP REC/PB mode
( ):LP REC mode
〈 〉:LP PB mode

| | VIDEO SIGNAL | | | AUDIO |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| REC | | | | ➡ |
| PB | | | ⇨≫ | ⇨ |

## PC-39 (AUDIO SIGNAL PROCESS) SCHEMATIC DIAGRAMS (2/2)

– Ref. No.: PC-39 Board; 6,000 series –


PC-39 BOARD (2/2)
IC501 μPC393G2-T1 T.C.AMP
Q506,508 AMP
Q509 COMPARATOR
Q511,512 AMP
Q514 AMP
Q505,521 SWITCH
Q515,516 AMP
Q517,518,520,522,523 TIME CONSTAN SELECT SWITCH
IC902 MC14052BF AUDIO SELECT (AFM EE/PB)
E TO PC-39 BOARD (1/2) (See page 157)
A L OUT
B R OUT
C GND
D SW +5V
E AUDIO PB
F RF SWP
G X2 ON
H PB RF (X)
I RF GND
J REC AFM (X)
K AF BIL
L SP/LP
M L IN
N R IN
O AF ST
P PB AF ST
Q PB AF BIL
R CONT
S TIMER TITLE
T SW-5V
PB AF ST
PB AF BIL
CONT
BIL
Q524,526 PB RF AMP
Q501,503 AFM REC AMP
Q502 CARRIEA BOOST SWITCH
Q504 1.7MHz CUT SWITCH
PB RF XA
PB GND
RF GND
REC AFM (X)
IC906 μPC4572G MIX INVERTER
PB SEP1
Q851,852 ELECTRONIC VOLUME
IC850 μPC45728 AGC
Q853,854 AMP
Q855,856 LPF
Q803,804 LP EMPHASIS SWITCH
FL801 1.7M BPF
1.7M DEV
1.7M CAR
RF GND
PB RF (X)
no mark: LP REC/PB mode
( ): LP REC mode
〈 〉: LP PB mode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A
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C
D
E
F
G
H
I
J
K
L
M
N
O
P
IC901
CXA1237A
AFM PROCESS
(L CH)
IC902
MC14052BF
AUDIO SELECT
(AFM EE/PB)
IC903
MC14052BF
AUDIO SELECT
(AFM REC)
IC904 IC905
μPC4572G
MIX INVERTER
IC906
μPC4572G
MIX INVERTER
IC801
CXA1237A
AFM PROCESS
(R CH)
IC401
CXD2106Q
REC AFM
CARRIER
PLL
Q901
DTC144EK
X2 SWITCH
Q801
DTC144EK
X2 SWITCH
Q940
2SC1623
CARRIER AMP
Q840
2SC1623
CARRIER AMP
Q803,804
LP EMPHASIS
SWITCH
Q803
DTC144EK
Q804
2SK160K5
FL901
1.5M
FL801
1.7M
BPF
1.5M CAR
1.5M DEV
1.7M CAR
1.7M DEV
REC SEP1
PB SEP1
PB SEP2
REC SEP2
RF GND
PB RF XA
PB RF OO
X401
4.43MHz
D401
1SS193
515,516
AMP
SWITCH
3
4

| | VIDEO SIGNAL | | | AUDIO |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| REC | | | | |
| PB | | | ⇨≫ | ⇨ |

## AUDIO AUDIO

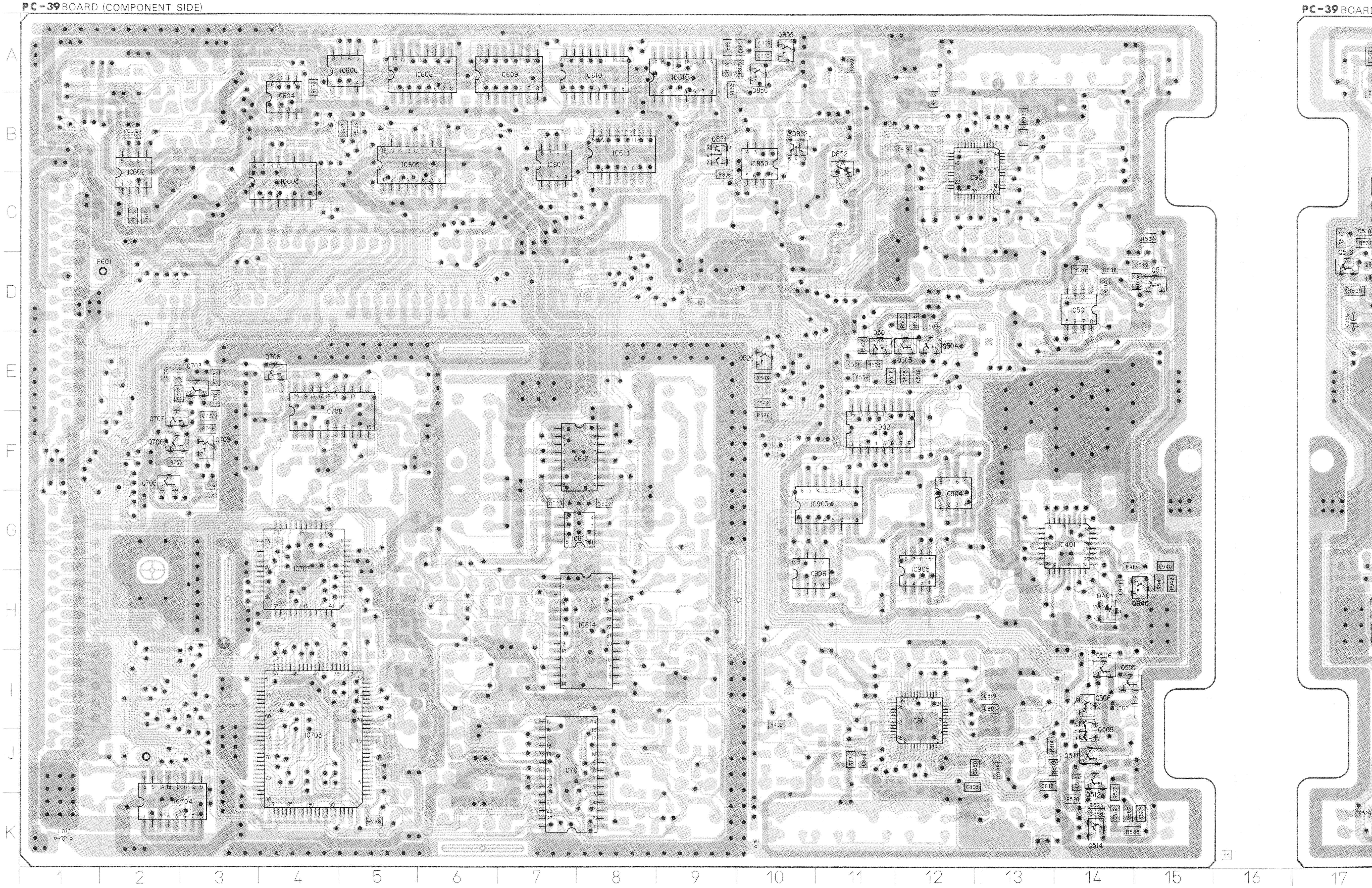
## PC-39 (AUDIO SIGNAL PROCESS) SCHEMATIC DIAGRAMS (1/2)

– Ref. No.: PC-39 Board; 6,000 series –

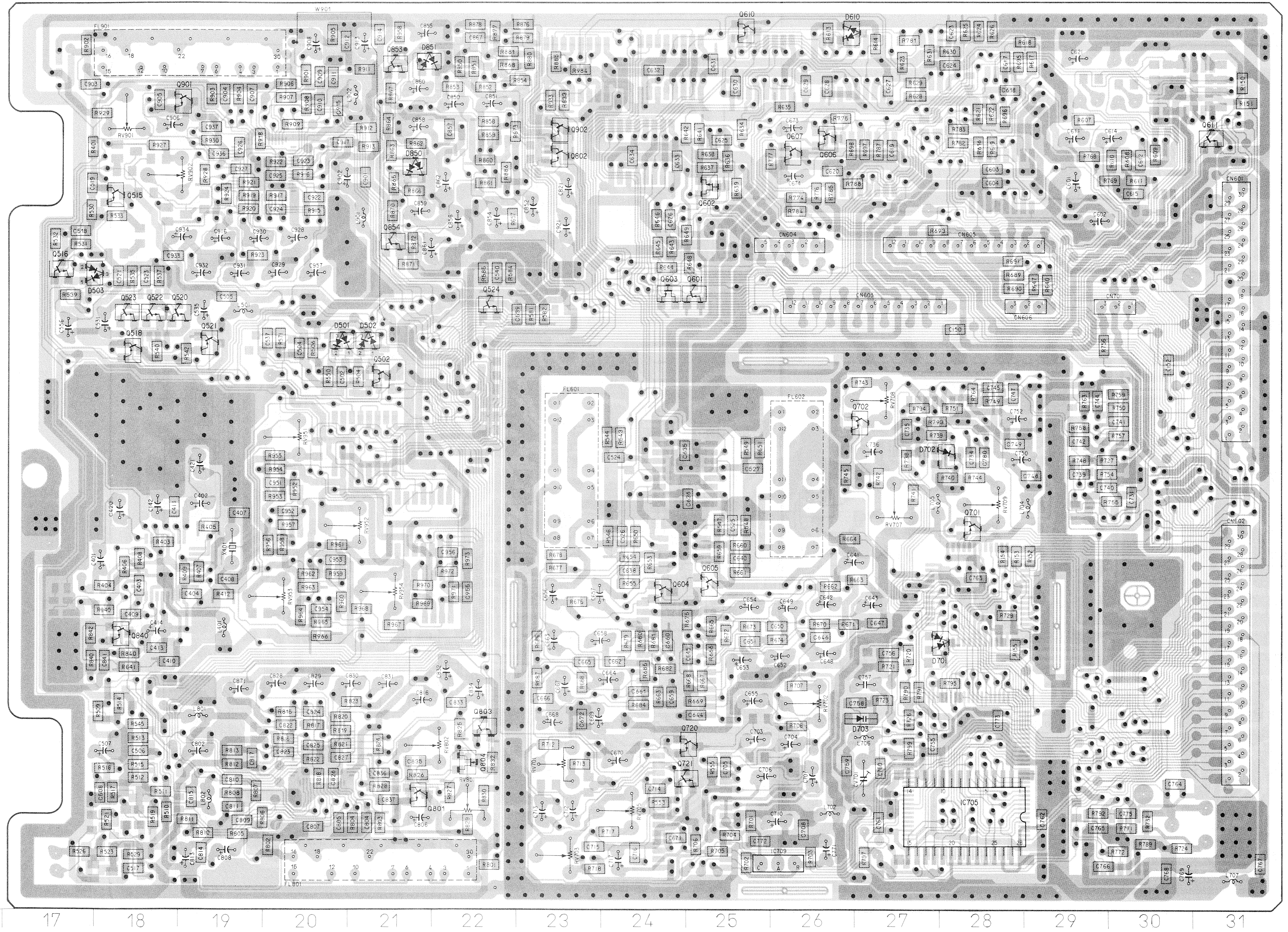
PC-39 BOARD

| | | | |
|---|---|---|---|
| D401 | H-14 | Q506 | I-14 |
| D501 | D-20 | Q508 | I-14 |
| D502 | D-21 | Q509 | J-14 |
| D503 | D-18 | Q511 | J-14 |
| D610 | A-26 | Q512 | J-14 |
| D701 | H-27 | Q514 | K-14 |
| D702 | F-28 | Q515 | C-18 |
| D703 | I-27 | Q516 | D-17 |
| D850 | B-21 | Q517 | D-15 |
| D851 | A-21 | Q518 | E-18 |
| D852 | B-11 | Q520 | D-18 |
| | | Q521 | D-19 |
| IC401 | G-14 | Q522 | D-18 |
| IC501 | D-14 | Q523 | D-18 |
| IC602 | C-2 | Q524 | D-22 |
| IC603 | C-4 | Q526 | E-10 |
| IC604 | B-4 | Q601 | D-25 |
| IC605 | B-5 | Q602 | C-25 |
| IC606 | A-5 | Q603 | D-24 |
| IC607 | B-7 | Q604 | G-24 |
| IC608 | A-6 | Q605 | G-25 |
| IC609 | A-7 | Q606 | B-26 |
| IC610 | A-8 | Q607 | B-26 |
| IC611 | B-8 | Q610 | A-25 |
| IC612 | F-8 | Q611 | B-31 |
| IC613 | G-8 | Q701 | G-28 |
| IC614 | H-8 | Q702 | E-27 |
| IC615 | A-9 | Q703 | E-3 |
| IC701 | J-7 | Q705 | F-2 |
| IC703 | J-4 | Q706 | F-2 |
| IC704 | J-2 | Q707 | F-2 |
| IC705 | J-28 | Q708 | I-25 |
| IC707 | G-4 | Q709 | E-3 |
| IC708 | F-4 | Q720 | I-25 |
| IC709 | K-26 | Q721 | J-24 |
| IC801 | I-12 | Q801 | J-21 |
| IC850 | B-10 | Q802 | B-23 |
| IC901 | C-13 | Q840 | H-18 |
| IC902 | F-11 | Q851 | B-9 |
| IC903 | G-11 | Q852 | B-10 |
| IC904 | G-12 | Q853 | A-21 |
| IC905 | H-12 | Q854 | C-21 |
| IC906 | H-10 | Q855 | A-10 |
| | | Q856 | A-10 |
| Q501 | E-11 | Q901 | B-19 |
| Q502 | E-21 | Q902 | B-23 |
| Q503 | E-12 | Q940 | H-15 |
| Q504 | E-12 | | |
| Q505 | I-14 | | |

**PC-39** BOARD (COMPONENT SIDE)


PC-39 BOARD
A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
IC602
IC603
IC604
IC605
IC606
IC607
IC608
IC609
IC610
IC611
IC612
IC613
IC614
IC615
IC701
IC703
IC704
IC707
IC708
IC801
IC850
IC901
IC902
IC903
IC904
IC905
IC906
IC401
IC501
LP601
Q501
Q503
Q504
Q505
Q506
Q508
Q509
Q511
Q512
Q514
Q516
Q517
Q526
Q703
Q705
Q706
Q707
Q708
Q709
Q851
Q852
Q855
Q856
Q940
D852
D401
L707

**PC-39** BOARD (CONDUCTOR SIDE)


W901
FL901
FL601
FL602
FL801
IC705
IC709
CN601
CN602
CN603
CN604
CN605
CN606
CN701
Q901
Q902
Q602
Q603
Q601
Q604
Q605
Q606
Q607
Q610
Q611
Q515
Q516
Q518
Q520
Q521
Q522
Q523
Q524
Q502
Q701
Q702
Q720
Q721
Q801
Q803
Q804
Q840
Q850
Q853
Q854
D501
D502
D503
D610
D701
D702
D703
D850
D851
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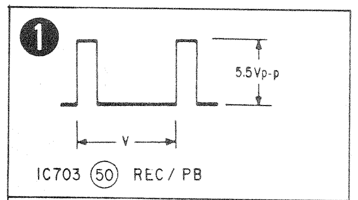
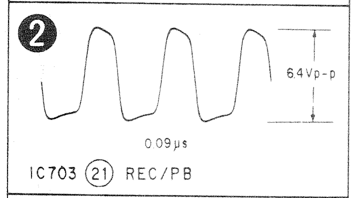
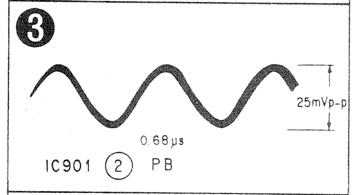
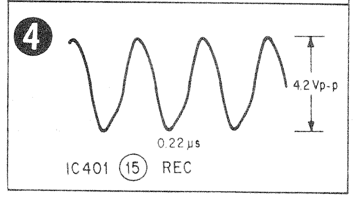
31





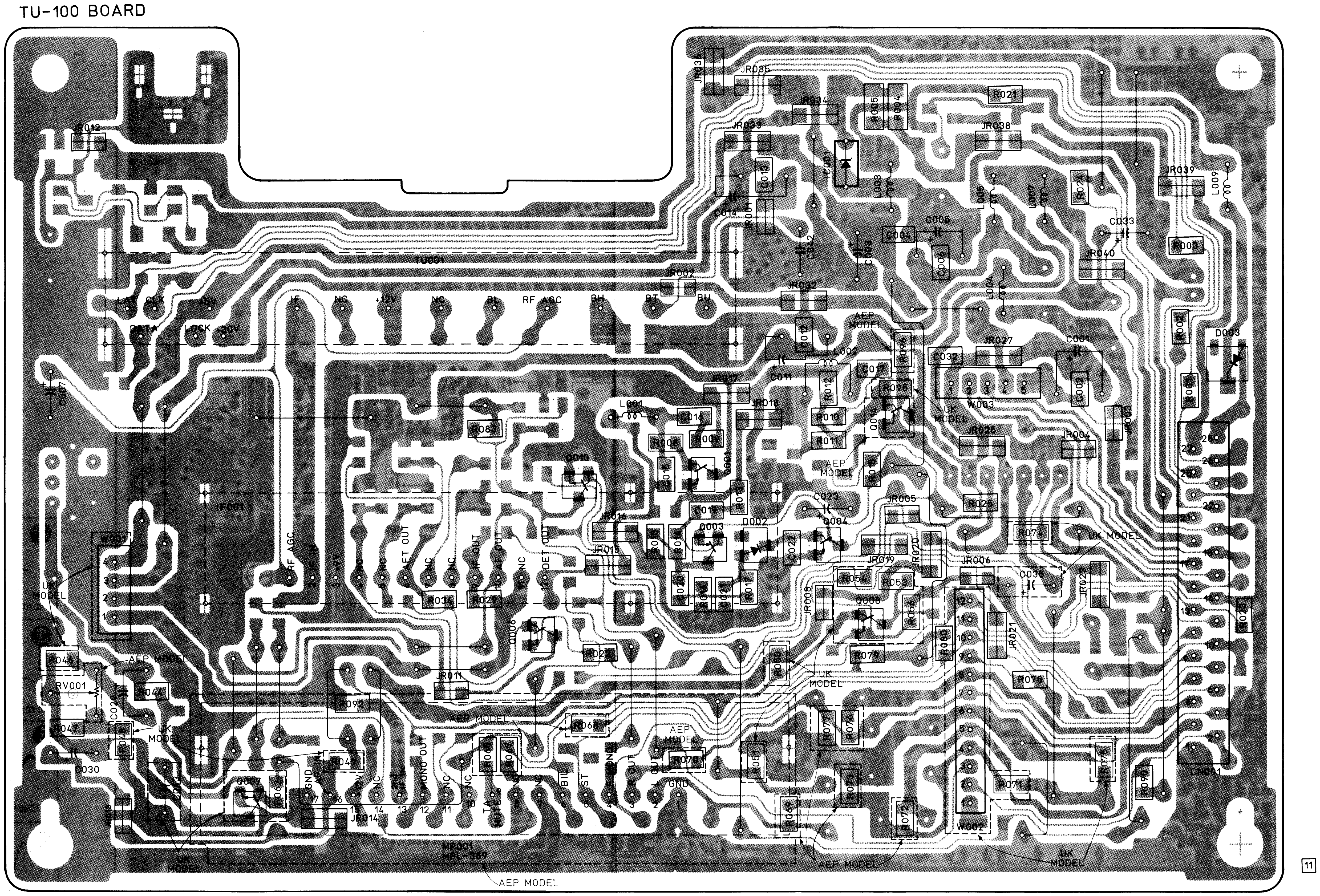




AUDIO AUDIO

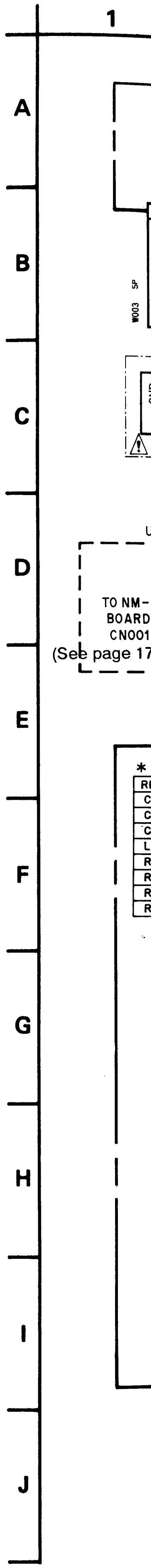
## TU-100 (TUNER) PRINTED WIRING BOARD

– Ref. No.: TU-100 Board; 7,000 series –


TU-100 BOARD
TU001
LAT
CLK
DATA
+5V
LOCK
+30V
IF
NC
+12V
NC
BL
RF AGC
BH
BT
BU
IF001
W001
UK MODEL
AEP MODEL
RV001
R044
R047
C029
C030
C007
JR012
Q007
Q006
Q010
Q001
Q003
Q004
Q008
Q014
D002
D003
IC001
L001
L002
L003
L004
L005
L007
L009
W002
W003
CN001
JR011
JR014
R092
R083
R034
R027
GND
MONO OUT
AFT OUT
DET OUT
R OUT
L OUT
ST
TA MUTE
MP001
MPL-389
11

TU-100 (TU

– Ref. No.: T


1
A
B
C
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F
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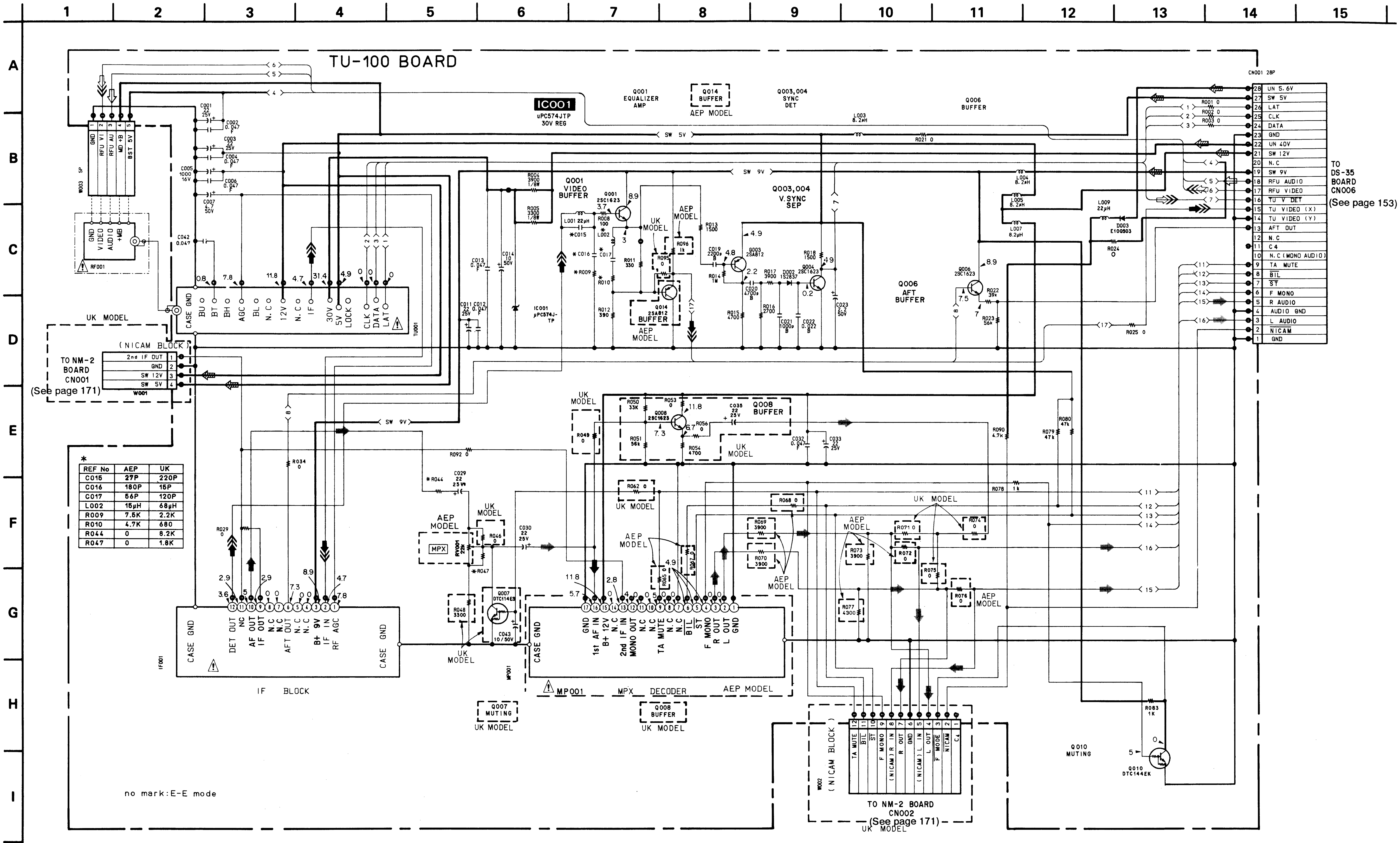
H
I
J
TO NM-
BOARD
CN001
(See page 17

## TU-100 (TUNER) SCHEMATIC DIAGRAM

– Ref. No.: TU-100 Board; 7,000 series –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I
J
TU-100 BOARD
IC001
uPC574JTP
30V REG
Q001
EQUALIZER
AMP
Q014
BUFFER
AEP MODEL
Q003,004
SYNC
DET
Q006
BUFFER
Q001
VIDEO
BUFFER
Q003,004
V.SYNC
SEP
Q006
AFT
BUFFER
Q014
2SA812
BUFFER
AEP MODEL
UK MODEL
SW 5V
SW 9V
W003
GND
RFU VI
RFU AU
MD +B
BST 5V
VIDEO
AUDIO
+MB
RF001
CASE GND
BU
BT
BH
AGC
BL
N.C
12V
N.C
IF
30V
5V
LOCK
CLK
DATA
LAT
TU001
UK MODEL
(NICAM BLOCK)
TO NM-2
BOARD
CN001
(See page 171)
W001
2nd IF OUT
GND
SW 12V
SW 5V
CN001 28P
28 UN 5.6V
27 SW 5V
26 LAT
25 CLK
24 DATA
23 GND
22 UN 40V
21 SW 12V
20 N.C
19 SW 9V
18 RFU AUDIO
17 RFU VIDEO
16 TU V DET
15 TU VIDEO (X)
14 TU VIDEO (Y)
13 AFT OUT
12 N.C
11 C4
10 N.C (MONO AUDIO)
9 TA MUTE
8 BIL
7 ST
6 F MONO
5 R AUDIO
4 AUDIO GND
3 L AUDIO
2 NICAM
1 GND
TO
DS-35
BOARD
CN006
(See page 153)
Q008
BUFFER
UK MODEL
AEP MODEL
MPX
RV001
Q007
DTC114ES
C043
10/50V
CASE GND
DET OUT
NC
AF OUT
IF OUT
N.C
N.C
AFT OUT
N.C
N.C
B+ 9V
IF IN
RF AGC
CASE GND
IF001
IF BLOCK
CASE GND
GND
1st AF IN
B+ 12V
N.C
2nd IF IN
MONO OUT
N.C
N.C
TA MUTE
N.C
N.C
BIL
ST
F MONO
R OUT
L OUT
GND
MP001
MPX DECODER
AEP MODEL
Q007
MUTING
UK MODEL
Q008
BUFFER
UK MODEL
W002
(NICAM BLOCK)
TA MUTE
BIL
ST
F MONO
(NICAM) R IN
R OUT
GND
(NICAM) L IN
L OUT
F MODE
NICAM
C4
TO NM-2 BOARD
CN002
(See page 171)
UK MODEL
Q010
MUTING
Q010
DTC144EK
no mark: E-E mode

| REF No | AEP | UK |
|---|---|---|
| C015 | 27P | 220P |
| C016 | 180P | 15P |
| C017 | 56P | 120P |
| L002 | 15μH | 68μH |
| R009 | 7.5K | 2.2K |
| R010 | 4.7K | 680 |
| R044 | 0 | 8.2K |
| R047 | 0 | 1.8K |

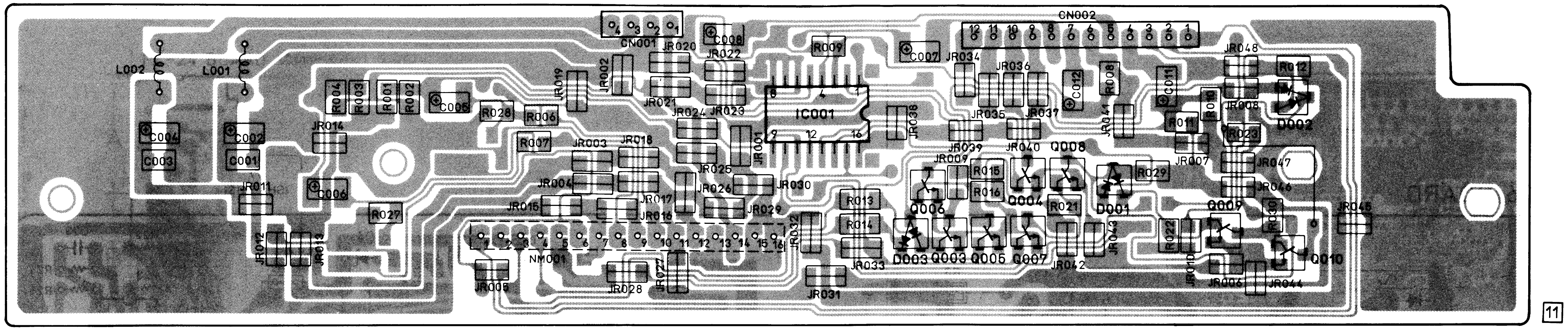
| | VIDEO SIGNAL | | | AUDIO |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| REC | | | ➡≫ | ➡ |
| PB | | | ⇨≫ | ⇨ |

**TUNER TUNER**

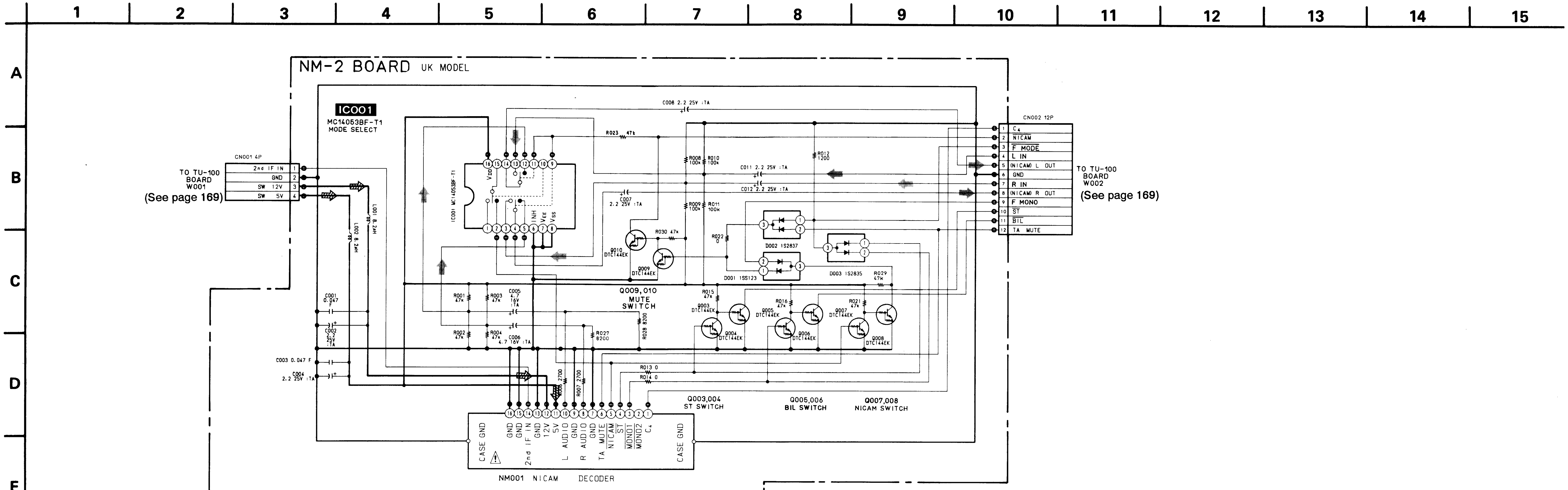
## NM-2 (NICAM) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

– Ref. No.: NM-2 Board; 9,000 series –

NM-2 BOARD UK MODEL



CN001
CN002
L001
L002
IC001
NM001
C001
C002
C003
C004
C006
C007
C008
C011
C012
Q003
Q004
Q005
Q006
Q007
Q008
Q009
Q010
D001
D002
D003
R001
R002
R003
R004
R006
R007
R008
R009
R010
R011
R012
R013
R014
R015
R016
R021
R022
R023
R027
R028
R029
R030
11



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12
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15
A
B
C
D
E
NM-2 BOARD UK MODEL
IC001
MC14053BF-T1
MODE SELECT
CN001 4P
2nd IF IN
GND
SW 12V
SW 5V
TO TU-100 BOARD W001
(See page 169)
CN002 12P
C4
NICAM
F MODE
L IN
(NICAM) L OUT
GND
R IN
(NICAM) R OUT
F MONO
ST
BIL
TA MUTE
TO TU-100 BOARD W002
(See page 169)
L001 8.2μH
L002 8.2μH
C001 0.047 F
C002 2.2 25V :TA
C003 0.047 F
C004 2.2 25V :TA
C005 4.7 16V :TA
C006 4.7 16V :TA
C007 2.2 25V :TA
C008 2.2 25V :TA
C011 2.2 25V :TA
C012 2.2 25V :TA
R001 47k
R002 47k
R003 47k
R004 47k
R007 2700
R008 100k
R009 100k
R010 100k
R011 100k
R012 1200
R013 0
R014 0
R015 47k
R016 47k
R021 47k
R022 0
R023 47k
R027 8200
R028 8200
R029 47k
R030 47k
Q009 DTC144EK
Q010 DTC144EK
Q009,010 MUTE SWITCH
Q003 DTC144EK
Q004 DTC144EK
Q005 DTC144EK
Q006 DTC144EK
Q007 DTC144EK
Q008 DTC144EK
Q003,004 ST SWITCH
Q005,006 BIL SWITCH
Q007,008 NICAM SWITCH
D001 1SS123
D002 1S2837
D003 1S2835
VDD
INH
VEE
VSS
CASE GND
GND
GND
2nd IF IN
GND
12V
5V
L AUDIO
GND
R AUDIO
GND
TA MUTE
NICAM
ST
MONO1
MONO2
C4
CASE GND
NM001 NICAM DECODER

* NICAM BROADCASTING MODE

① L R ( STEREO )

② MONO1 (M1) + DATA ( BILINGUAL )

③ MONO1 (M1) + MONO2 (M2) ( TRILINGUAL )

④ DATA + DATA

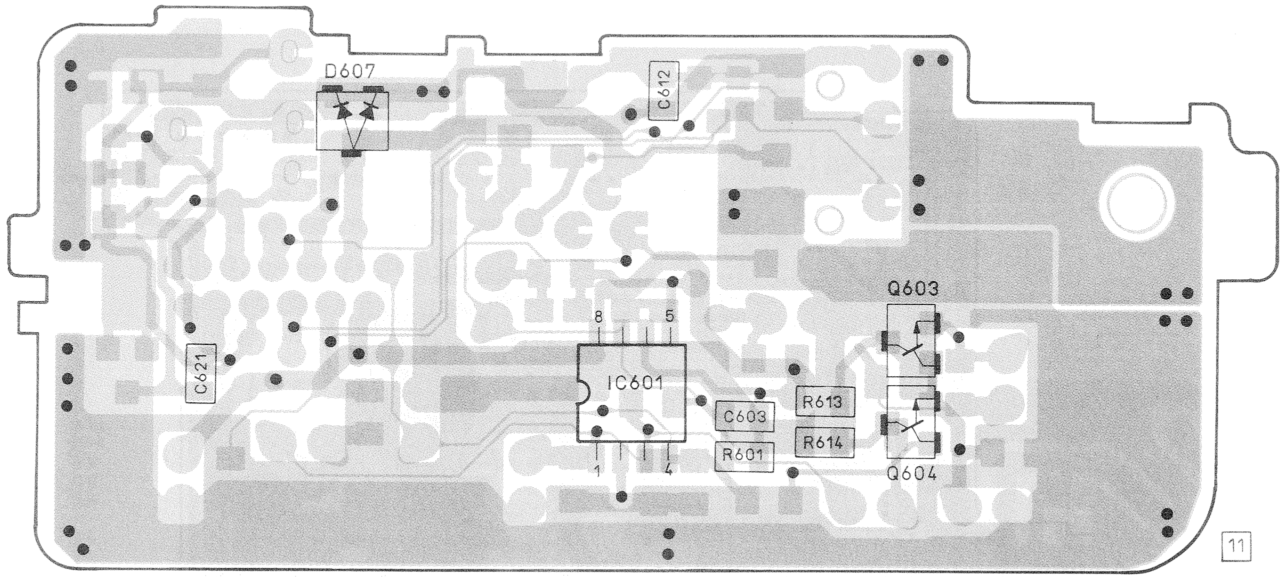
PCM >> NICAM • A TABLE OF HITHERTO FM SOUND OUT SELECT

| $\overline{\text{NICAM}}$ | $\overline{\text{ST}}$ | $\overline{\text{BIL}}$ | PCM | |
|---|---|---|---|---|
| | | | L | R |
| 0 | 0 | 1 | NICAM L | NICAM R |
| 1 | 1 | 1 | L+R | L+R |
| 0 | 1 | 0 | NICAM M1 | NICAM M1 |
| 1 | 1 | 1 | L+R | L+R |
| 0 | 1 | 0 | NICAM M1 | NICAM M2 |
| 1 | 1 | 1 | L+R | L+R |

| | VIDEO SIGNAL | | | AUDIO |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| REC | | | | ➡ |
| PB | | | | |

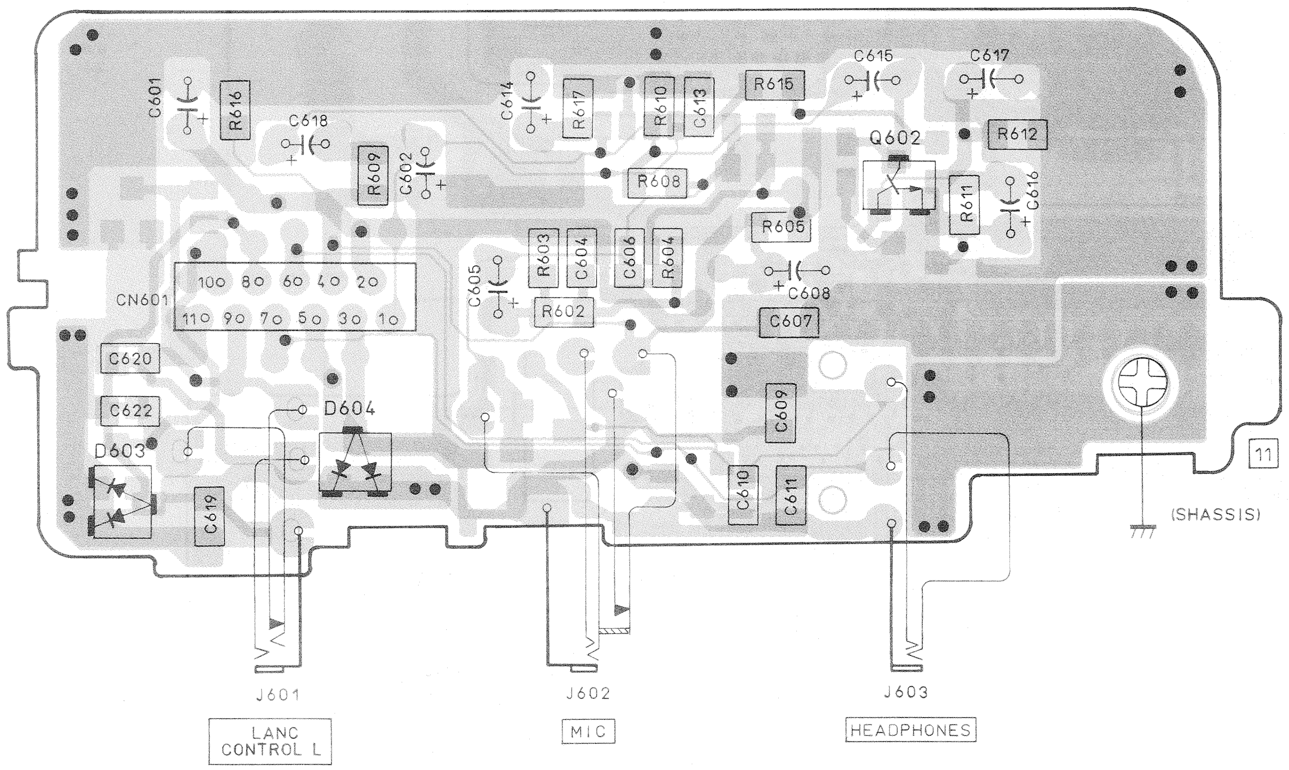
## MC-37 (MIC AMP) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

– Ref. No.: MC-37 Board;10,000 series –



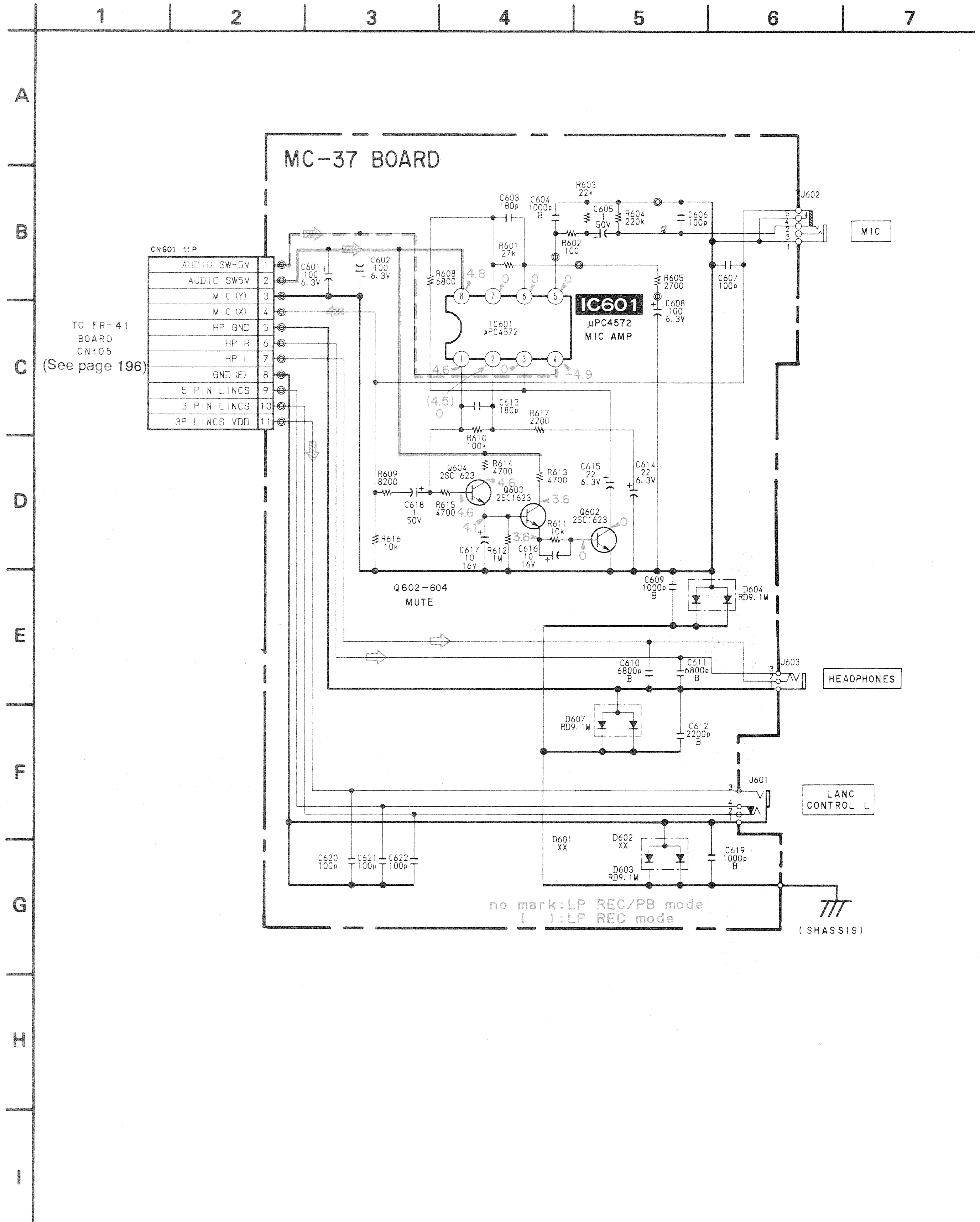
MC-37 BOARD (COMPONENT SIDE)

D607
C612
Q603
C621
IC601
8
5
1
4
C603
R601
R613
R614
Q604
11



MC-37 BOARD (CONDUCTOR SIDE)

C601
R616
C618
R609
C602
C614
R617
R610
C613
R615
C615
C617
Q602
R612
R608
R611
C616
R605
CN601
10○ 8○ 6○ 4○ 2○
11○ 9○ 7○ 5○ 3○ 1○
C605
R603
C604
C606
R604
R602
C608
C607
C620
C622
D604
D603
C619
C609
C610
C611
11
(SHASSIS)
J601
LANC CONTROL L
J602
MIC
J603
HEADPHONES



1
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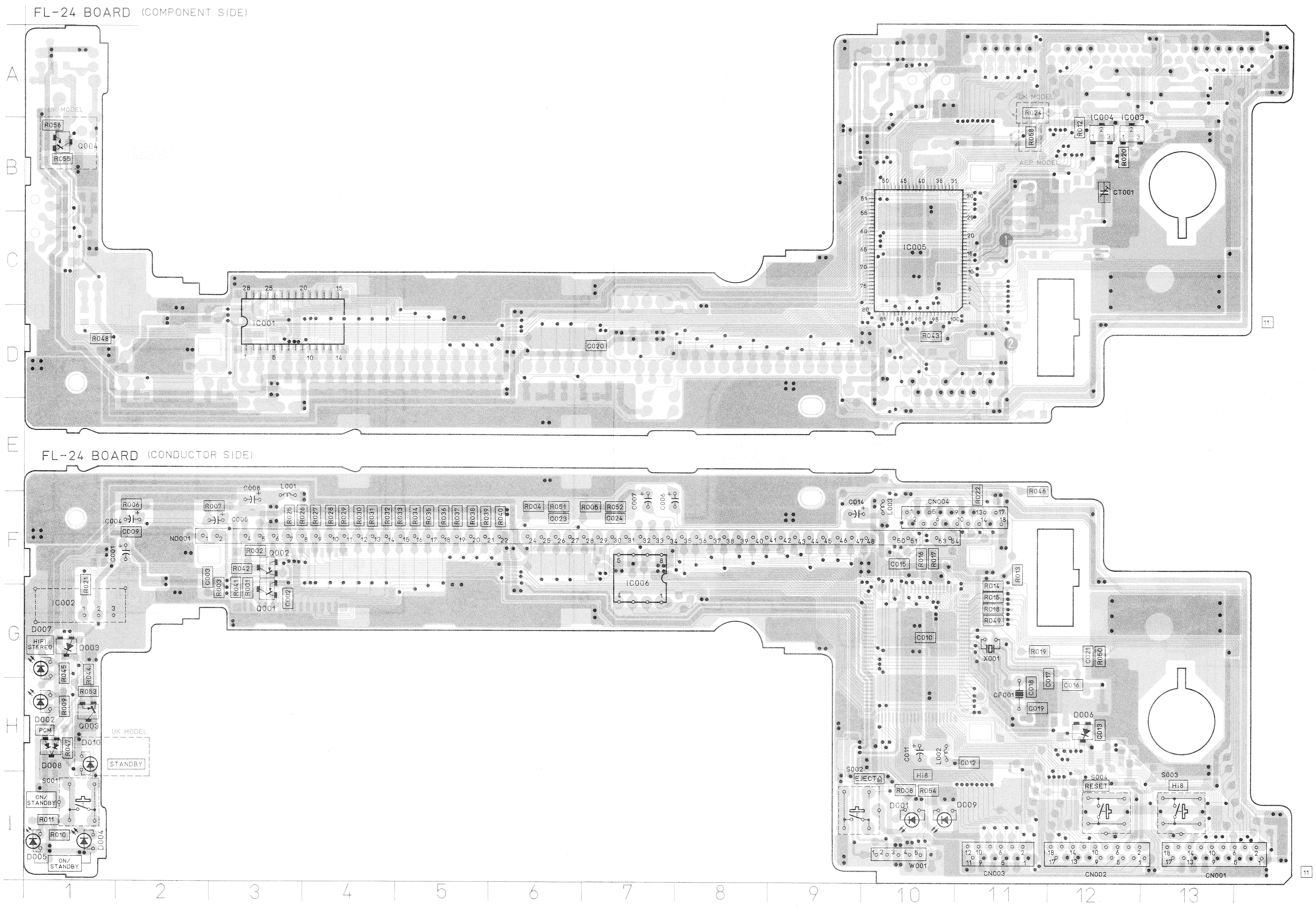
7
A
B
C
D
E
F
G
H
MC-37 BOARD
CN601 11P
AUDIO SW-5V
AUDIO SW5V
MIC (Y)
MIC (X)
HP GND
HP R
HP L
GND (E)
5 PIN LINCS
3 PIN LINCS
3P LINCS VDD
TO FR-41 BOARD CN105
(See page 196)
IC601
µPC4572
MIC AMP
J602
MIC
J603
HEADPHONES
J601
LANC CONTROL L
Q602-604
MUTE
Q604 2SC1623
Q603 2SC1623
Q602 2SC1623
D604 RD9.1M
D607 RD9.1M
D601 XX
D602 XX
D603 RD9.1M
(SHASSIS)
no mark:LP REC/PB mode
( ):LP REC mode

| | VIDEO SIGNAL | | | AUDIO |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| REC | | | | ➡ |
| PB | | | | ⇨ |

## FL-24 (FLUORESCENT DISPLAY) PRINTED WIRING BOARD

– Ref. No.: FL-24 Board; 11,000 series –

| FL-24 BOARD | |
|---|---|
| D001 | I-10 |
| D002 | H-1 |
| D003 | G-1 |
| D004 | I-1 |
| D005 | I-1 |
| D006 | H-12 |
| D007 | G-1 |
| D008 | H-1 |
| D009 | I-11 |
| D010 | H-1<br>(UK model) |
| IC001 | D-3 |
| IC002 | G-1 |
| IC003 | B-12 |
| IC004 | B-12 |
| IC005 | C-10 |
| IC006 | F-7 |
| Q001 | G-3 |
| Q002 | F-3 |
| Q003 | H-1 |
| Q004 | B-1<br>(UK model) |


FL-24 BOARD (COMPONENT SIDE)
FL-24 BOARD (CONDUCTOR SIDE)
A
B
C
D
E
F
G
H
I
1
2
3
4
5
6
7
8
9
10
11
12
13
IC001
IC002
IC003
IC004
IC005
IC006
Q001
Q002
Q003
Q004
UK MODEL
AEP MODEL
CT001
X001
CF001
ND001
HIFI STEREO
PCM
ON/STANDBY
STANDBY
EJECT
RESET
Hi8
S001
S002
S003
S004
W001
CN001
CN002
CN003
CN004
D001
D002
D003
D004
D005
D006
D007
D008
D009
D010
11

## PS-19

– Ref.

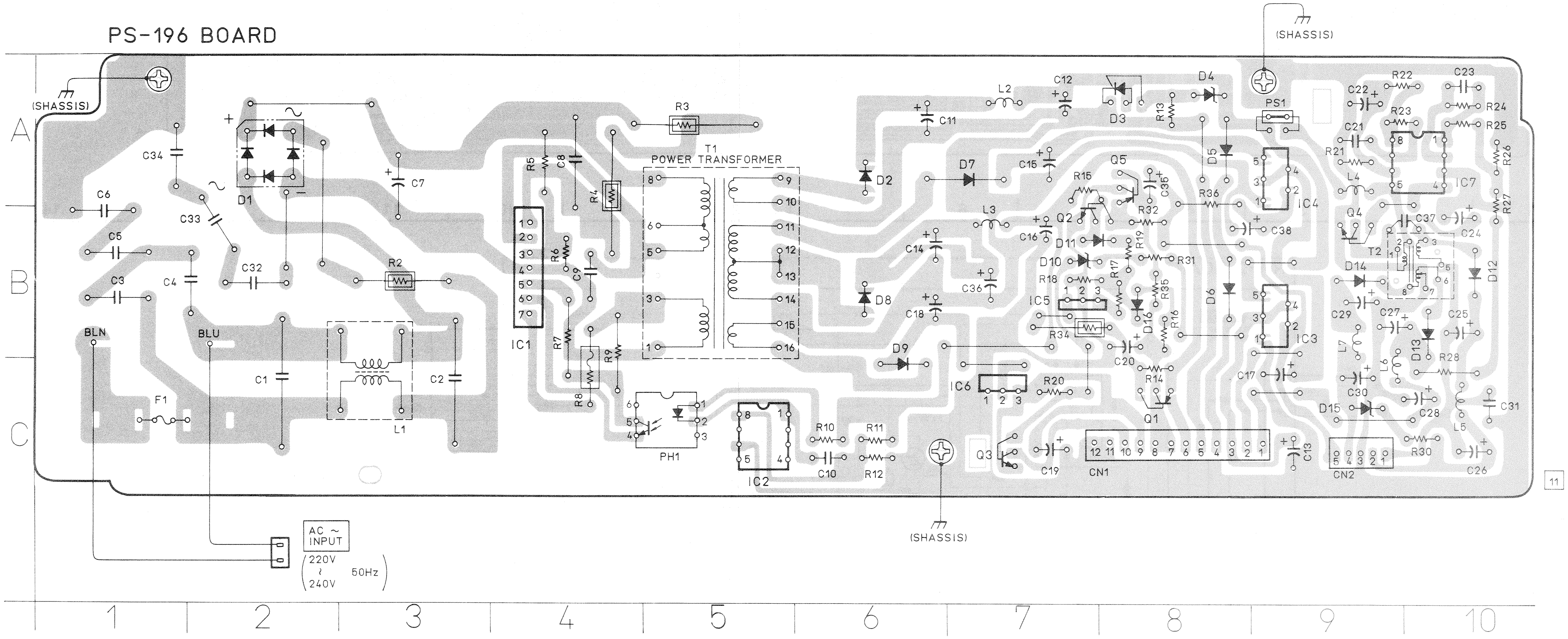
| PS-196 BOARD | |
|---|---|
| D1 | A-2 |
| D2 | A-6 |
| D3 | A-8 |
| D4 | A-8 |
| D5 | A-8 |
| D6 | B-8 |
| D7 | A-7 |
| D8 | B-6 |
| D9 | B-9 |
| D10 | B-7 |
| D11 | B-7 |
| D12 | B-10 |
| D13 | B-10 |
| D14 | B-9 |
| D15 | C-9 |
| D16 | B-8 |
| IC1 | B-4 |
| IC2 | C-5 |
| IC3 | B-9 |
| IC4 | A-9 |
| IC5 | B-7 |
| IC6 | C-7 |
| IC7 | A-10 |
| PH1 | C-5 |
| Q1 | C-8 |
| Q2 | A-7 |
| Q3 | C-7 |
| Q4 | B-9 |
| Q5 | A-8 |

## PS-196 (POWER SUPPLY) PRINTED WIRING BOARD

– Ref. No.: PS-196 Board; 12,000 series –

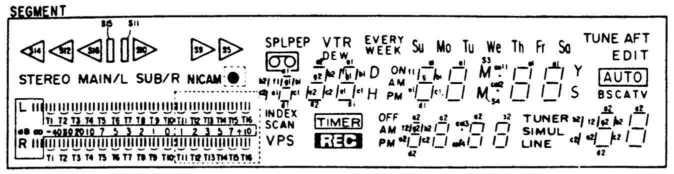
PS-196 BOARD

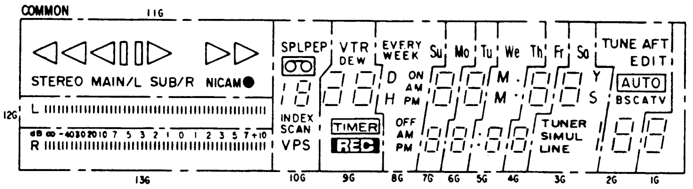
| | |
|---|---|
| D1 | A-2 |
| D2 | A-6 |
| D3 | A-8 |
| D4 | A-8 |
| D5 | A-8 |
| D6 | B-8 |
| D7 | A-7 |
| D8 | B-6 |
| D9 | B-9 |
| D10 | B-7 |
| D11 | B-7 |
| D12 | B-10 |
| D13 | B-10 |
| D14 | B-9 |
| D15 | C-9 |
| D16 | B-8 |
| IC1 | B-4 |
| IC2 | C-5 |
| IC3 | B-9 |
| IC4 | A-9 |
| IC5 | B-7 |
| IC6 | C-7 |
| IC7 | A-10 |
| PH1 | C-5 |
| Q1 | C-8 |
| Q2 | A-7 |
| Q3 | C-7 |
| Q4 | B-9 |
| Q5 | A-8 |


PS-196 BOARD
(SHASSIS)
A
B
C
1
2
3
4
5
6
7
8
9
10
D1
C34
C33
C6
C5
C3
C4
C32
C7
R2
BLN
BLU
F1
C1
C2
L1
R3
R5
C8
R4
R6
C9
R7
R8
R9
IC1
T1
POWER TRANSFORMER
PH1
IC2
R10
R11
C10
R12
D2
D7
D8
D9
C11
L2
C12
D3
D4
R13
D5
PS1
C15
L3
C14
C16
C18
C36
Q2
Q5
R15
C35
R32
D11
D10
R18
R17
R19
R31
R35
IC5
R34
D16
R16
C20
IC6
R20
R14
Q1
Q3
C19
CN1
C13
R36
C38
IC4
D6
IC3
C17
C22
R22
C23
R24
R23
R25
C21
R21
IC7
R26
R27
L4
Q4
C37
C24
T2
D14
D12
C29
C27
C25
L7
L6
D13
R28
C30
C28
D15
L5
C31
R30
CN2
C26
11
AC ~ INPUT
220V ~ 240V
50Hz

## FL-24 (FLUORESCENT DISPLAY) SCHEMATIC DIAGRAM

– Ref. No.: FL-24 Board; 11,000 series –


SEGMENT
STEREO MAIN/L SUB/R NICAM
SP LP EP
VTR
DEW
EVERY WEEK
Su Mo Tu We Th Fr Sa
TUNE AFT
EDIT
AUTO
BS CATV
INDEX
SCAN
VPS
TIMER
REC
ON
OFF
AM
PM
TUNER
SIMUL
LINE
L
R
D
H
M
S
Y

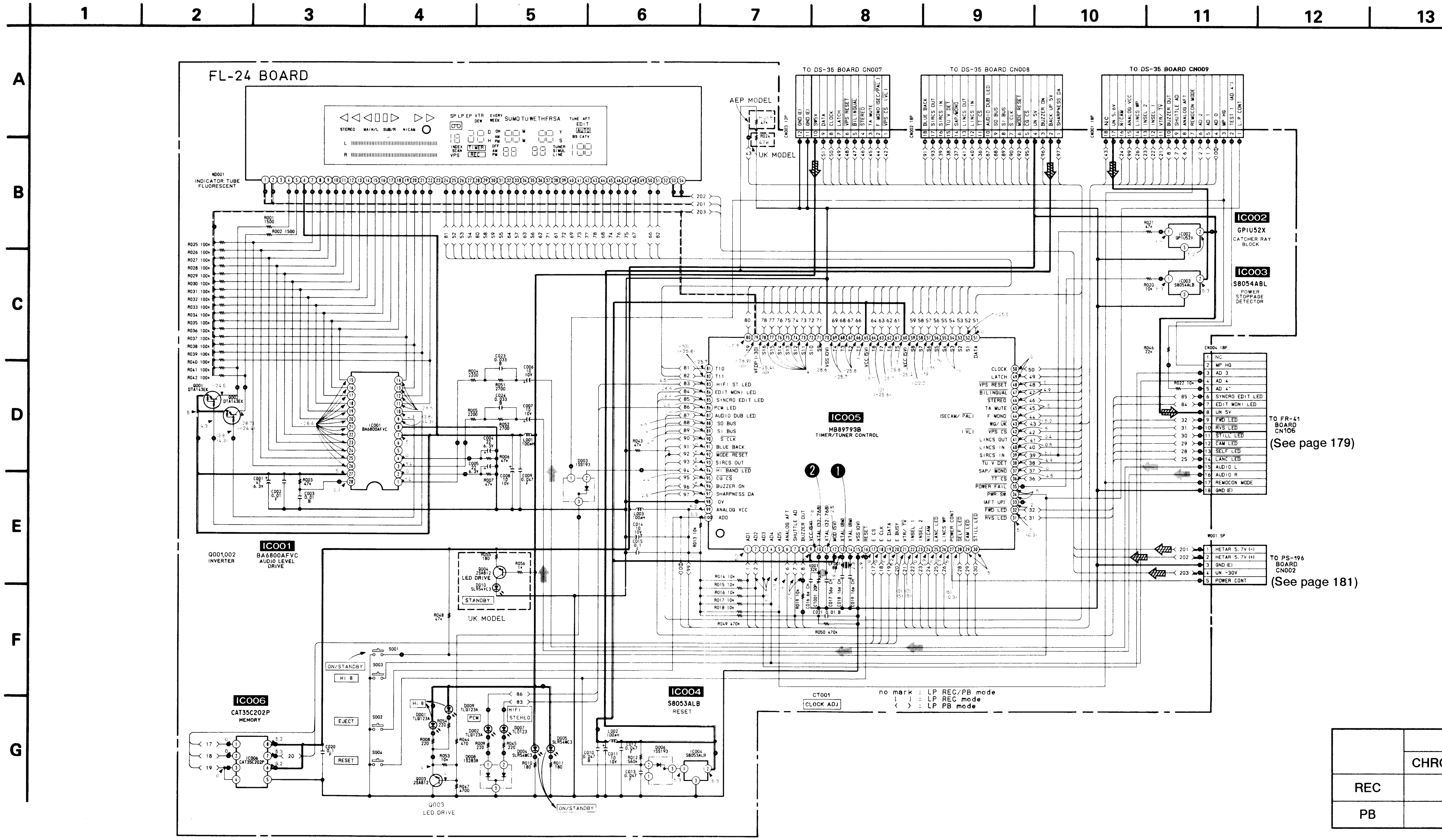

COMMON
11G
STEREO MAIN/L SUB/R NICAM
SP LP EP
VTR
DEW
EVERY WEEK
Su Mo Tu We Th Fr Sa
TUNE AFT
EDIT
AUTO
BS CATV
INDEX
SCAN
VPS
TIMER
REC
TUNER
SIMUL
LINE
12G
13G
10G
9G
8G
7G
6G
5G
4G
3G
2G
1G

INTERNAL CONNECTION

| | 11G | 10G | 9G | 8G | 7G | 6G | 5G | 4G | 3G | 2G | 1G |
|---|---|---|---|---|---|---|---|---|---|---|---|
| S1 | STEREO | EP | VTR | EVERY WEEK | Mo | Tu | We | Fr | Sa | TUNE | |
| S2 | MAIN | a1 | a1 | Su | a1 | a1 | Th | a1 | a1 | AFT | |
| S3 | L | b1 | b1 | D | b1 | b1 | M Up | b1 | b1 | EDIT | |
| S4 | NICAM | c1 | c1 | H | c1 | c1 | M Down | c1 | c1 | | |
| S5 | ▷ R | d1 | d1 | | d1 | d1 | · col4 | d1 | d1 | CATV | |
| S6 | ● | e1 | e1 | PM | e1 | e1 | · col3 | e1 | e1 | AUTO | |
| S7 | SUB | f1 | f1 | ON | f1 | f1 | · col1 | f1 | f1 | | |
| S8 | R | g1 | g1 | AM | g1 | g1 | · col2 | g1 | g1 | | |
| S9 | ▷ M | | | | | | | | Y | BS | |
| S10 | ▷ L | 📼 | g2 | | a2 | a2 | a2 | a2 | S | a2 | a2 |
| S11 | ▯ R | SP | b2 | | b2 | b2 | b2 | b2 | b1, c2 | b2 | b2 |
| S12 | ◁ M | VPS | c2 | OFF | c2 | c2 | c2 | c2 | TUNER | c2 | c2 |
| S13 | | LP | DEW | PM | d2 | d2 | d2 | d2 | LINE | d2 | d2 |
| S14 | ◁ L | b2, c2 | e2 | AM | e2 | e2 | e2 | e2 | SIMUL | e2 | e2 |
| S15 | ▯ L | INDEX | TIMER | | f2 | f2 | f2 | f2 | | f2 | f2 |
| S16 | ◁ R | SCAN | REC | | g2 | g2 | g2 | g2 | | g2 | g2 |

PS-196 (P

– Ref. No.


1
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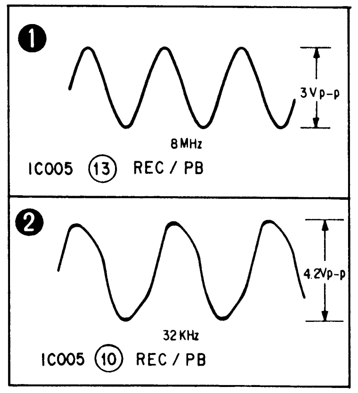
11
12
13
14
15
A
B
C
D
E
F
G
FL-24 BOARD
ND001
INDICATOR TUBE
FLUORESCENT
AEP MODEL
UK MODEL
TO DS-35 BOARD CN007
TO DS-35 BOARD CN008
TO DS-35 BOARD CN009
IC002
GP1U52X
CATCHER RAY BLOCK
IC003
S8054ABL
POWER STOPPAGE DETECTOR
IC005
MB89793B
TIMER/TUNER CONTROL
IC001
BA6800AFVC
AUDIO LEVEL DRIVE
Q001,002
INVERTER
Q004
2SA812
LED DRIVE
D010
SLR54VC3
STANDBY
UK MODEL
IC006
CAT35C202P
MEMORY
IC004
S8053ALB
RESET
ON/STANDBY
HI 8
EJECT
RESET
S001
S002
S003
S004
Q003
LED DRIVE
PCM
HIFI
STEREO
CT001
CLOCK ADJ
❶
❷
CN004 18P
1 NC
2 MP HG
3 AD 3
4 AD 4
5 AD 4'
6 SYNCRO EDIT LED
7 EDIT MONI LED
8 UN 5V
9 FWD LED
10 RVS LED
11 STILL LED
12 CAM LED
13 SELF LED
14 LANC LED
15 AUDIO L
16 AUDIO R
17 REMOCON MODE
18 GND (E)
TO FR-41 BOARD CN106
W001 5P
1 HETAR 5.7V (-)
2 HETAR 5.7V (+)
3 GND (E)
4 UN -30V
5 POWER CONT
TO PS-196 BOARD CN002

(See page 179)

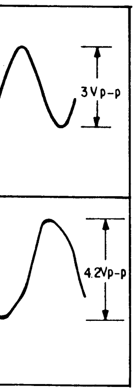
(See page 181)

no mark : LP REC/PB mode
( ) : LP REC mode
< > : LP PB mode



| | VIDEO SIGNAL | | | AUDIO |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| REC | | | | ➡ |
| PB | | | | |

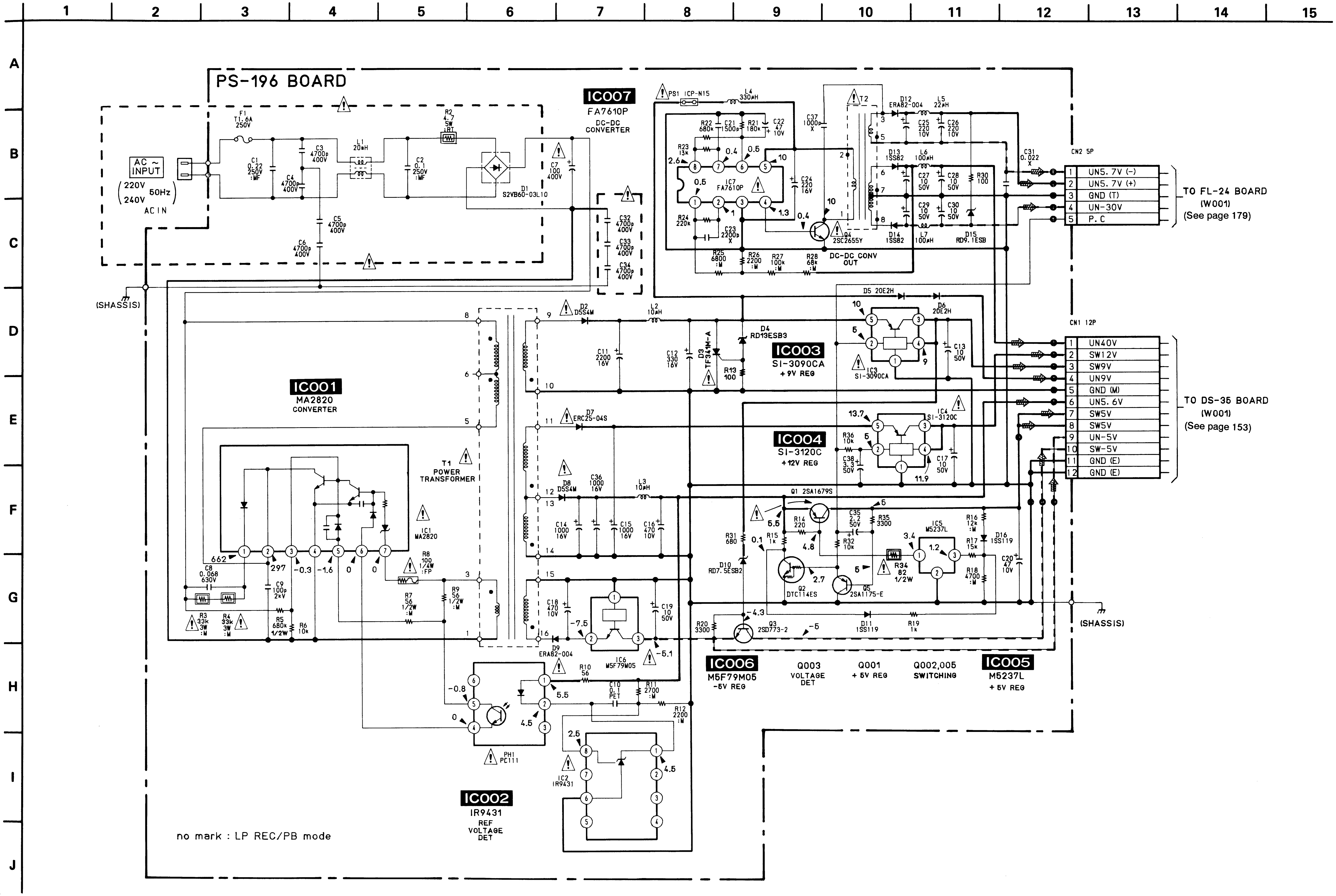
| IG |
|---|
| |
| a2 |
| b2 |
| c2 |
| d2 |
| e2 |
| f2 |
| g2 |
| 15 |



| AUDIO |
|---|
| ➡ |

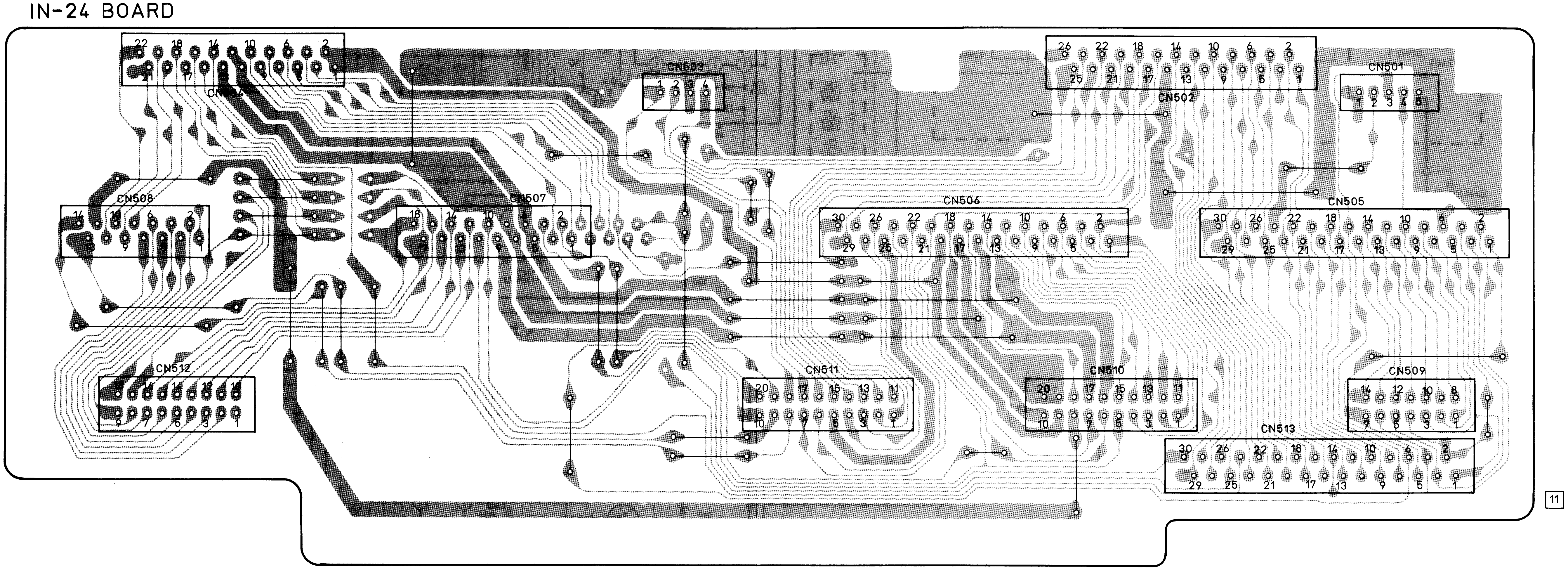
## PS-196 (POWER SUPPLY) SCHEMATIC DIAGRAM

– Ref. No.: PS-196 Board; 12,000 series –


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
A B C D E F G H I J
PS-196 BOARD
AC ~ INPUT
220V 240V 50Hz
AC IN
(SHASSIS)
F1 T1.6A 250V
L1 20μH
C1 0.22 250V :MF
C2 0.1 250V :MF
C3 4700p 400V
C4 4700p 400V
C5 4700p 400V
C6 4700p 400V
R2 4.7 5W :RT
D1 S2VB60-03L10
C7 100 400V
C32 4700p 400V
C33 4700p 400V
C34 4700p 400V
IC007
FA7610P
DC-DC CONVERTER
PS1 ICP-N15
L4 330μH
IC7 FA7610P
Q4 2SC2655Y
T2
DC-DC CONV OUT
D12 ERA82-004
D13 1SS82
D14 1SS82
D15 RD9.1ESB
L5 22μH
L6 100μH
L7 100μH
C31 0.022
CN2 5P
1 UN5.7V (-)
2 UN5.7V (+)
3 GND (T)
4 UN-30V
5 P.C
TO FL-24 BOARD (W001) (See page 179)
IC001
MA2820
CONVERTER
IC1 MA2820
T1 POWER TRANSFORMER
D2 D5S4M
L2 10μH
D3 TF341M-A
D4 RD13ESB3
IC003
SI-3090CA
+9V REG
IC3 SI-3090CA
D5 20E2H
D6 20E2H
D7 ERC25-04S
IC004
SI-3120C
+12V REG
IC4 SI-3120C
D8 D5S4M
L3 10μH
Q1 2SA1679S
Q2 DTC114ES
Q3 2SD773-2
Q5 2SA1175-E
IC5 M5237L
D9 ERA82-004
D10 RD7.5ESB2
D11 1SS119
D16 1SS119
IC6 M5F79M05
PH1 PC111
IC2 IR9431
CN1 12P
1 UN40V
2 SW12V
3 SW9V
4 UN9V
5 GND (M)
6 UN5.6V
7 SW5V
8 SW5V
9 UN-5V
10 SW-5V
11 GND (E)
12 GND (E)
TO DS-35 BOARD (W001) (See page 153)
(SHASSIS)
IC006
M5F79M05
-5V REG
Q003 VOLTAGE DET
Q001 +5V REG
Q002,005 SWITCHING
IC005
M5237L
+5V REG
IC002
IR9431
REF VOLTAGE DET
no mark : LP REC/PB mode

## IN-24 (SIGNAL INTERMEDIATION) PRINTED WIRING BOARD

– Ref. No.: IN-24 Board; 13,000 series –

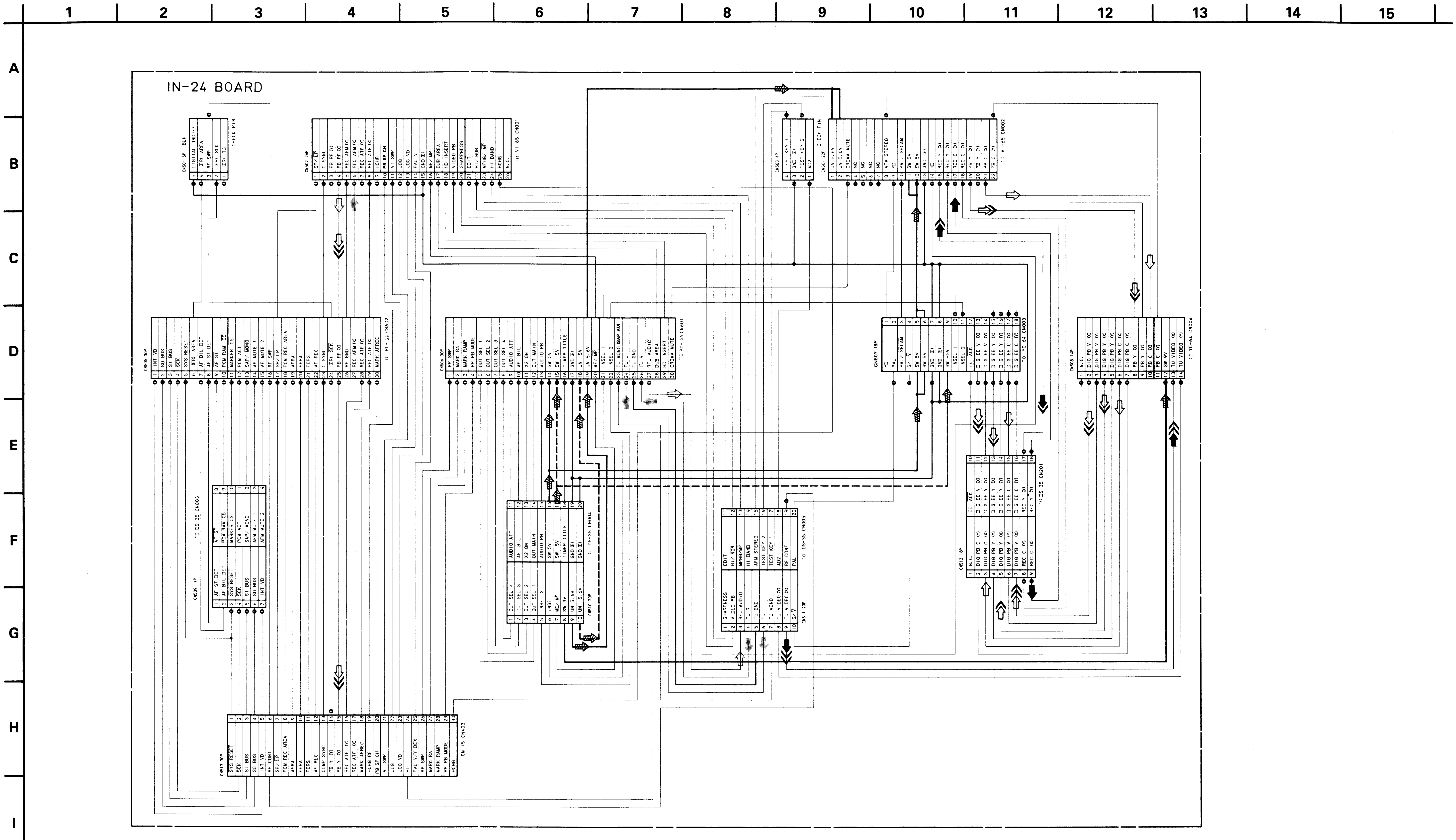

IN-24 BOARD
CN504
CN503
CN502
CN501
CN508
CN507
CN506
CN505
CN512
CN511
CN510
CN509
CN513
11

IN-24 (SIG
– Ref. No.:

1
A
B
C
D
E
F
G
H
I
J

## IN-24 (SIGNAL INTERMEDIATION) SCHEMATIC DIAGRAM

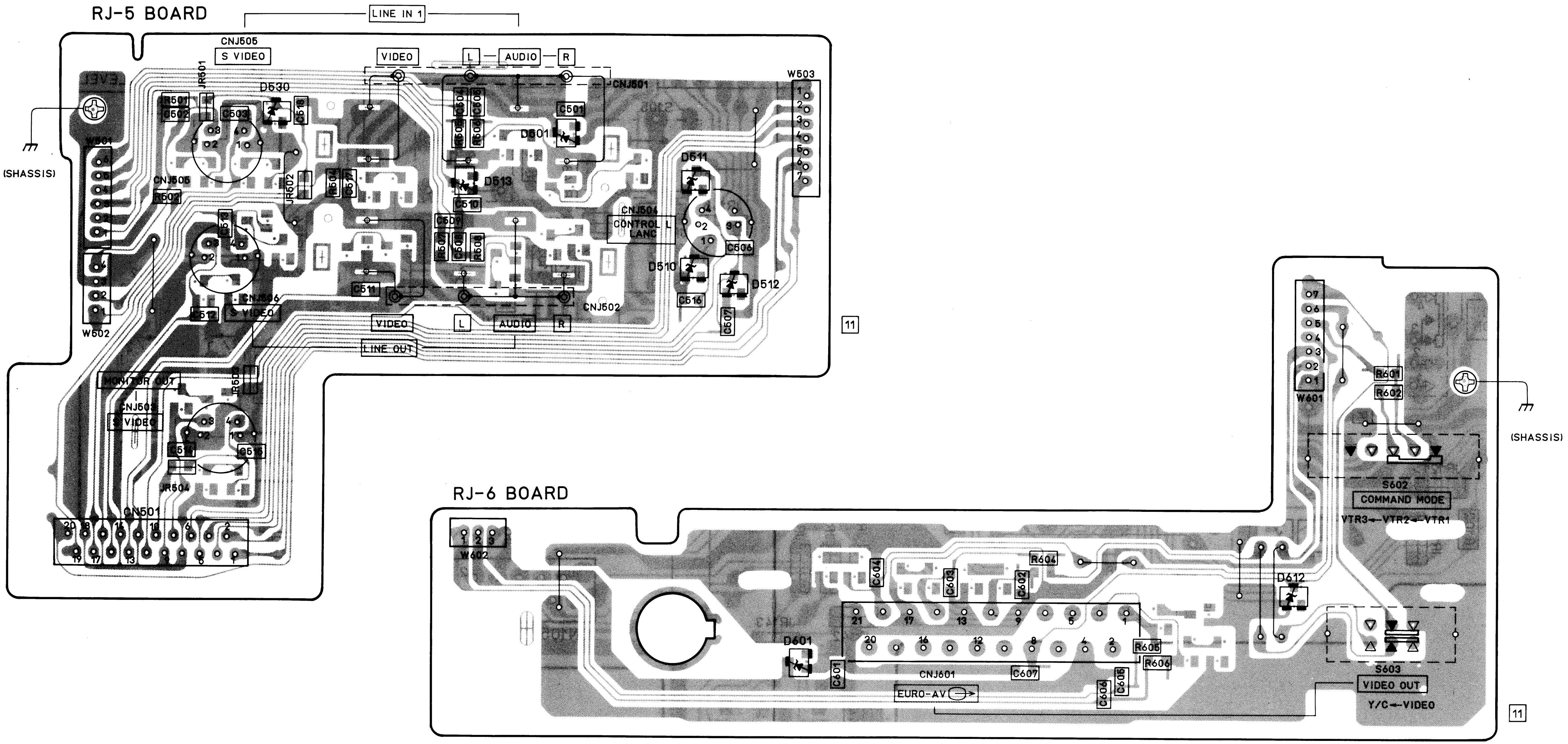
– Ref. No.: IN-24 Board; 13,000 series –


IN-24 BOARD
CN501 5P BLK
CHECK PIN
CN502 26P
TO VI-65 CN001
CN503 4P
CN504 22P
TO VI-65 CN002
CN505 30P
TO PC-35 CN602
CN506 30P
TO PC-39 CN601
CN507 18P
TO YC-64 CN003
CN508 14P
TO YC-64 CN004
CN509 14P
TO DS-35 CN003
CN510 20P
TO DS-35 CN004
CN511 20P
TO DS-35 CN005
CN512 18P
TO DS-35 CN201
CN513 30P
TO CM-15 CN403

| | VIDEO SIGNAL | | | AUDIO |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| REC | ➡ | ➡» | ➡»» | ➡ |
| PB | ⇨ | ⇨» | ⇨»» | ⇨ |

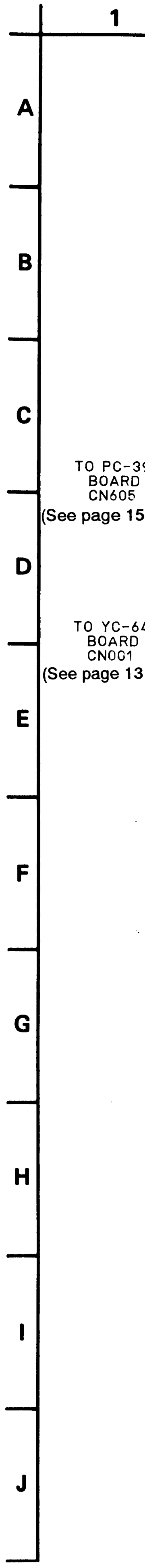
## RJ-5 (LINE IN 1), RJ-6 (EURO-AV CONNECTOR) PRINTED WIRING BOARDS

– Ref. No.: RJ-5, RJ-6 Boards; 14,000 series –


RJ-5 BOARD
LINE IN 1
CNJ505
S VIDEO
VIDEO
L
AUDIO
R
CNJ501
W503
JR501
R501
C502
C503
D530
C518
W501
(SHASSIS)
CNJ505
R502
JR502
R504
C517
C504
R503
C509
C505
R505
C501
D501
D513
C510
C508
R506
C507
D511
CNJ504
CONTROL L
LANC
C506
D510
C516
D512
C507
C513
C511
CNJ502
VIDEO
L
AUDIO
R
LINE OUT
C512
CNJ506
S VIDEO
W502
MONITOR OUT
CNJ503
S VIDEO
JR503
C514
C515
JR504
CN501
11
RJ-6 BOARD
W602
C604
C603
R604
C602
D612
D601
CNJ601
C601
C607
EURO-AV
C606
C605
R605
R606
W601
R601
R602
(SHASSIS)
S602
COMMAND MODE
VTR3←VTR2←VTR1
S603
VIDEO OUT
Y/C←VIDEO
11

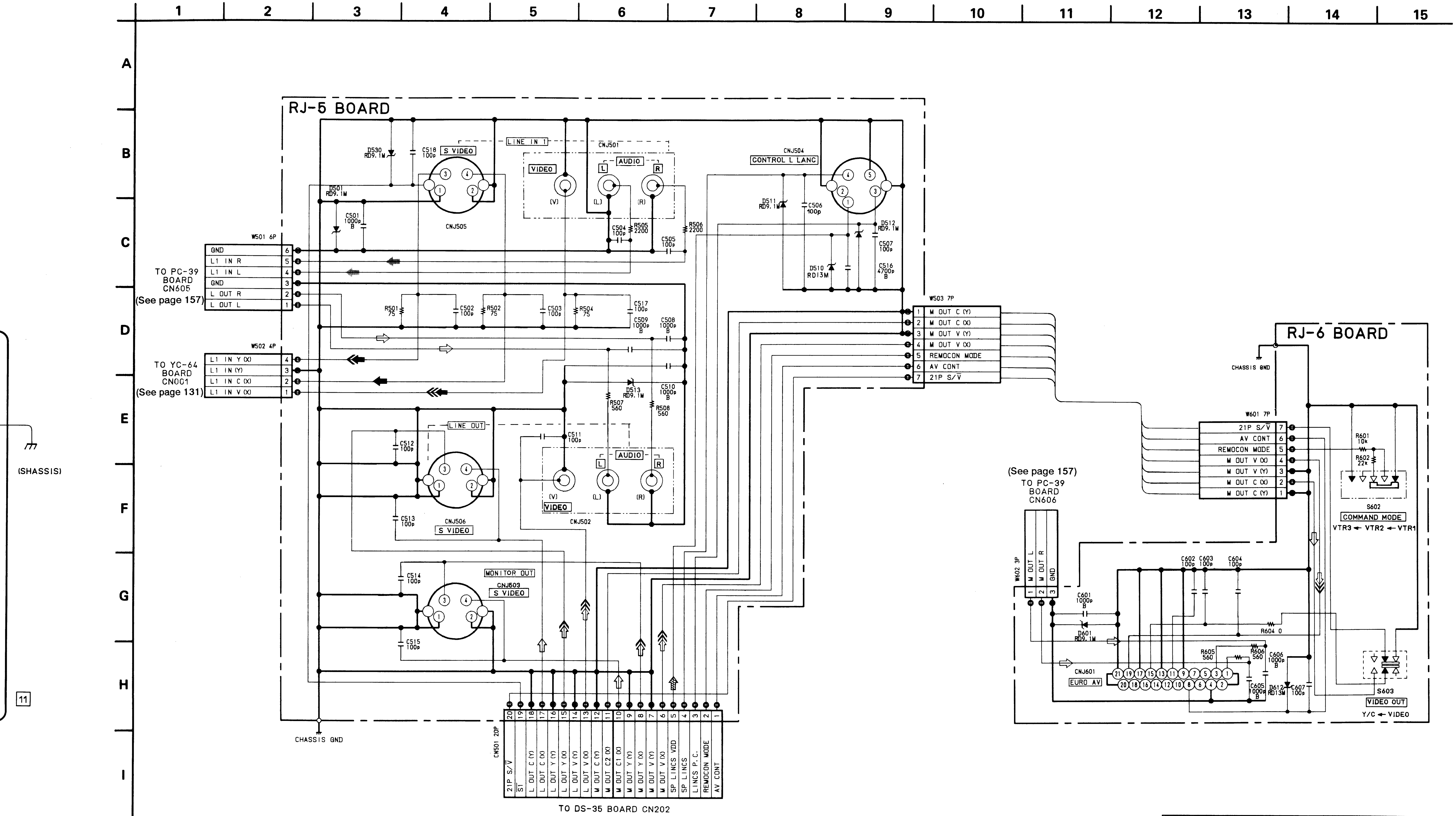
RJ-5 (LINE

– Ref. No.:


1
A
B
C
TO PC-3
BOARD
CN605
(See page 15
D
TO YC-6
BOARD
CN001
(See page 13
E
F
G
H
I
J

## RJ-5 (LINE IN 1), RJ-6 (EURO-AV CONNECTOR) SCHEMATIC DIAGRAM

– Ref. No.: RJ-5, RJ-6 Boards; 14,000 series –


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
H
I
J
(SHASSIS)
11
RJ-5 BOARD
D530 RD9.1M
C518 100p
S VIDEO
LINE IN 1
CNJ501
VIDEO
AUDIO
L
R
(V)
(L)
(R)
D501 RD9.1M
C501 1000p B
CNJ505
C504 100p
R505 2200
R506 2200
C505 100p
CNJ504
CONTROL L LANC
D511 RD9.1M
C506 100p
D512 RD9.1M
C507 100p
D510 RD13M
C516 4700p B
W501 6P
GND
L1 IN R
L1 IN L
GND
L OUT R
L OUT L
TO PC-39 BOARD CN605 (See page 157)
R501 75
C502 100p
R502 75
C503 100p
R504 75
C517 100p
C509 1000p B
C508 1000p B
W503 7P
M OUT C (Y)
M OUT C (X)
M OUT V (Y)
M OUT V (X)
REMOCON MODE
AV CONT
21P S/V̄
W502 4P
L1 IN Y (X)
L1 IN (Y)
L1 IN C (X)
L1 IN V (X)
TO YC-64 BOARD CN001 (See page 131)
D513 RD9.1M
C510 1000p B
R507 560
R508 560
LINE OUT
C512 100p
C511 100p
AUDIO
L
R
CNJ506
S VIDEO
C513 100p
(V)
(L)
(R)
VIDEO
CNJ502
C514 100p
MONITOR OUT
CNJ503
S VIDEO
C515 100p
CHASSIS GND
CN501 20P
21P S/V̄
S̄1̄
L OUT C (Y)
L OUT C (X)
L OUT Y (Y)
L OUT Y (X)
L OUT V (Y)
L OUT V (X)
M OUT C (Y)
M OUT C2 (X)
M OUT C1 (X)
M OUT Y (Y)
M OUT Y (X)
M OUT V (Y)
M OUT V (X)
5P LINCS VDD
5P LINCS
LINCS P.C.
REMOCON MODE
AV CONT
TO DS-35 BOARD CN202 (See page 149)
RJ-6 BOARD
CHASSIS GND
W601 7P
21P S/V̄
AV CONT
REMOCON MODE
M OUT V (X)
M OUT V (Y)
M OUT C (X)
M OUT C (Y)
R601 10k
R602 22k
S602
COMMAND MODE
VTR3 ← VTR2 ← VTR1
(See page 157)
TO PC-39 BOARD CN606
W602 3P
M OUT L
M OUT R
GND
C602 100p
C603 100p
C604 100p
C601 1000p B
D601 RD9.1M
R604 0
R605 560
R606 560
C606 1000p B
CNJ601
EURO AV
C605 1000p B
D612 RD13M
C607 100p
S603
VIDEO OUT
Y/C ← VIDEO

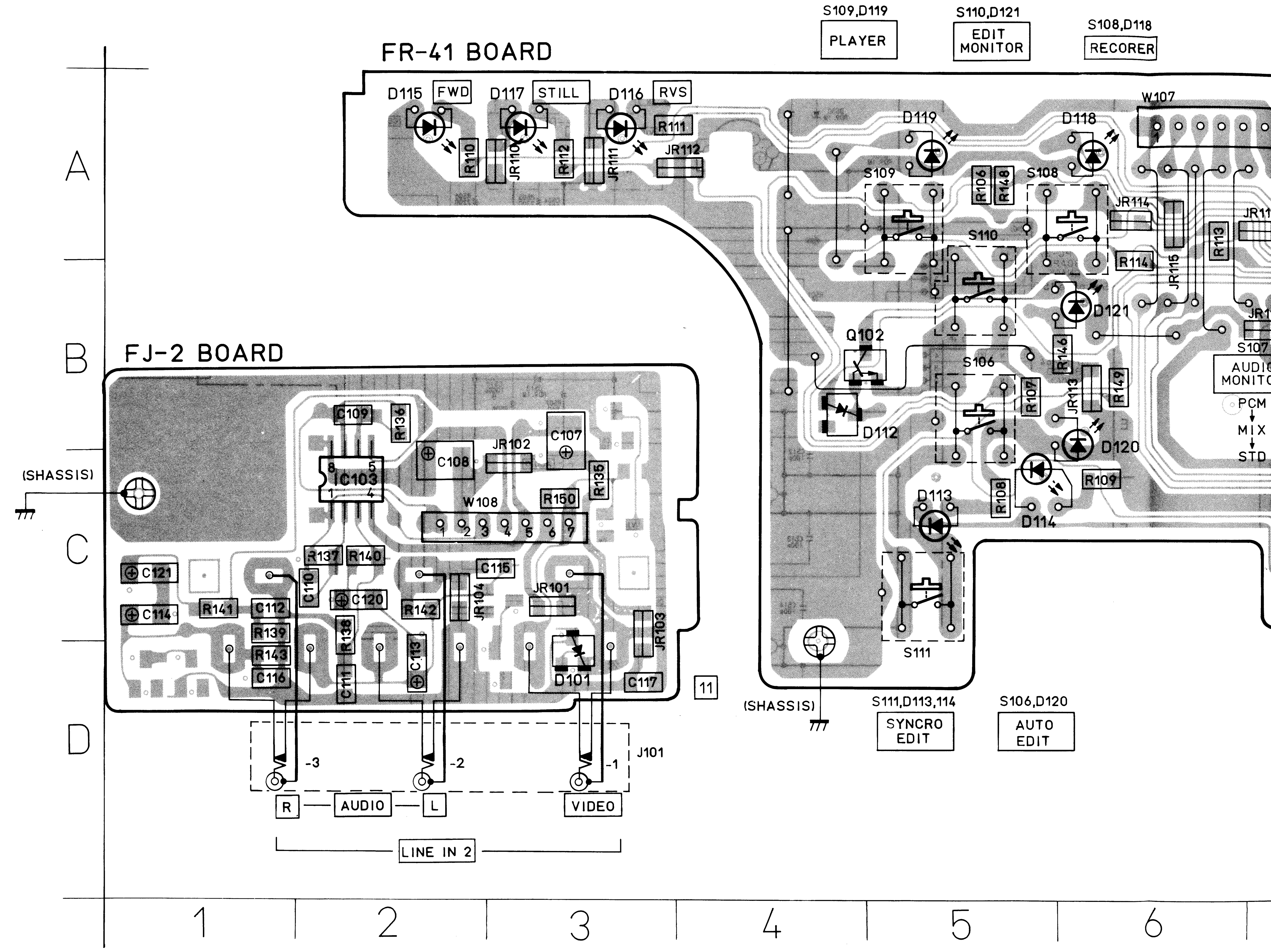
| | VIDEO SIGNAL | | | AUDIO |
|---|---|---|---|---|
| | CHROMA | Y | Y/CHROMA | |
| REC | ➡ | ⇨» | ➡» | ➡ |
| PB | ⇨ | ➡» | ⇨» | ⇨ |

## FR-41 (MODE CONTROL), FJ-2 (LINE IN 2) PRINTED WIRING BOARDS

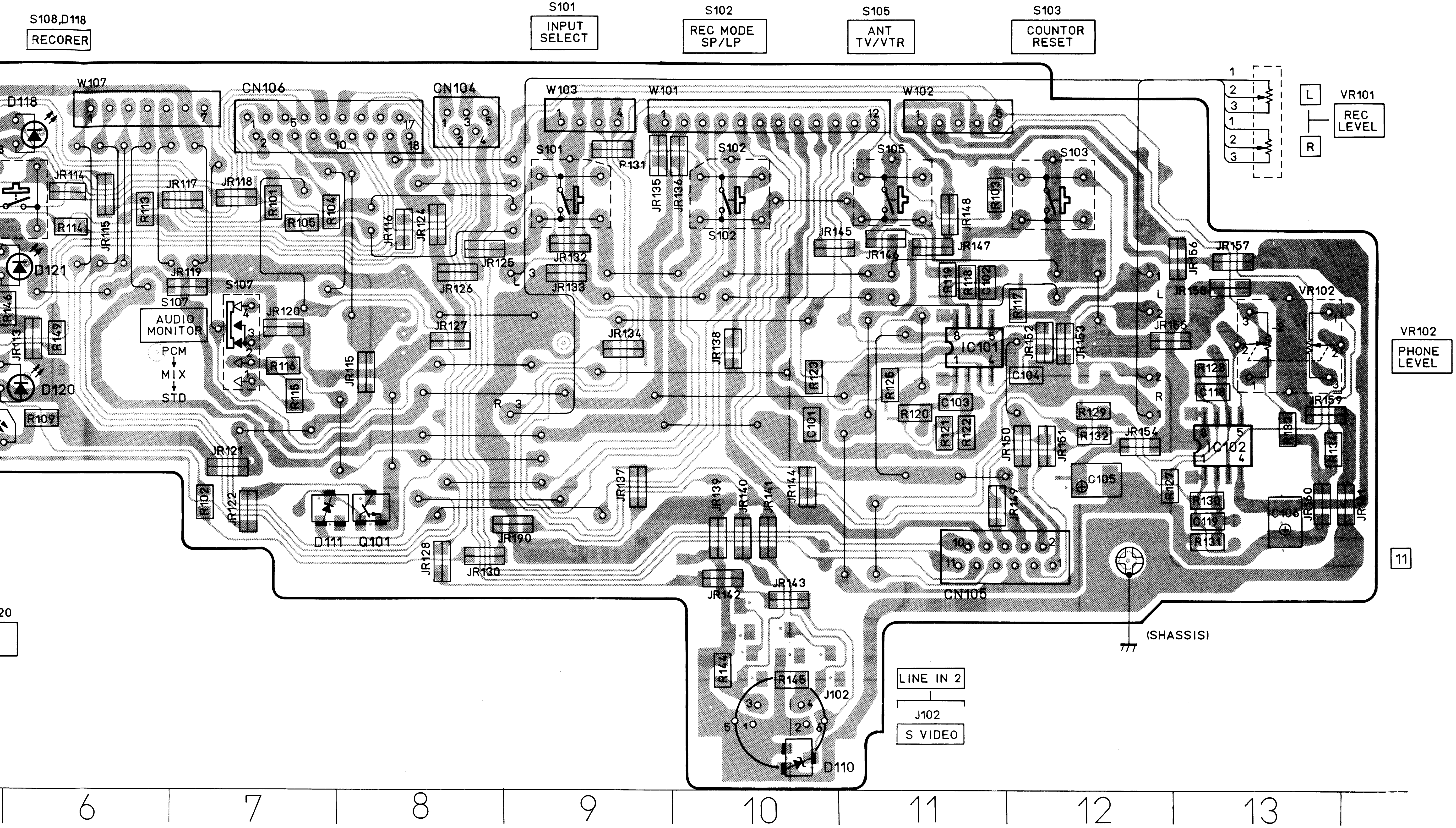
– Ref. No.: FR-41, FJ-2 Boards; 15,000 series –

FR-41 BOARD

| | |
|---|---|
| D110 | D-10 |
| D111 | C-7 |
| D112 | B-4 |
| D113 | C-5 |
| D114 | C-5 |
| D115 | A-2 |
| D116 | A-3 |
| D117 | A-3 |
| D118 | A-6 |
| D119 | A-5 |
| D120 | B-6 |
| D121 | B-6 |
| IC101 | B-11 |
| IC102 | C-13 |
| Q101 | C-8 |
| Q102 | B-4 |



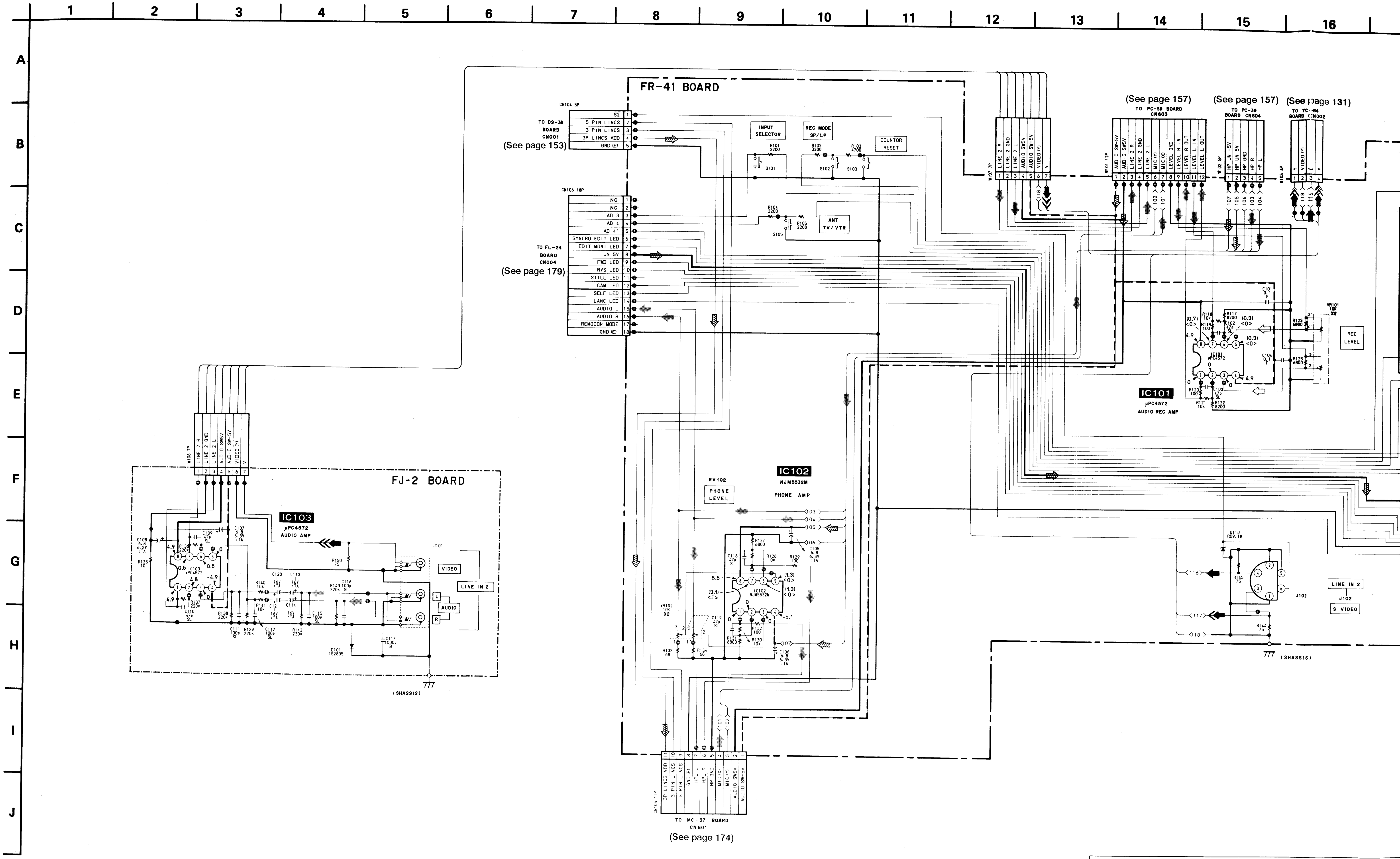
FR-41 BOARD
FJ-2 BOARD
S109,D119
PLAYER
S110,D121
EDIT MONITOR
S108,D118
RECORER
D115
FWD
D117
STILL
D116
RVS
R110
JR110
R112
JR111
R111
JR112
W107
D119
D118
S109
S108
R106
R148
JR114
S110
R114
JR115
R113
D121
Q102
S107
AUDIO MONITO
PCM
MIX
STD
S106
R146
JR113
R149
R107
D112
D120
R109
D114
D113
R108
S111
(SHASSIS)
S111,D113,114
SYNCRO EDIT
S106,D120
AUTO EDIT
C109
R136
C107
C108
JR102
IC103
8
5
1
4
R135
R150
W108
1
2
3
4
5
6
7
R137
R140
C115
C121
C114
R141
C112
C110
C120
R142
JR104
JR101
JR103
R139
R143
C116
R138
C111
C113
D101
C117
11
J101
-3
-2
-1
R
AUDIO
L
VIDEO
LINE IN 2
A
B
C
D
1
2
3
4
5
6


S108,D118
RECORER
S101
INPUT SELECT
S102
REC MODE SP/LP
S105
ANT TV/VTR
S103
COUNTOR RESET
VR101
REC LEVEL
L
R
VR102
PHONE LEVEL
W107
CN106
CN104
W103
W101
W102
D118
D121
D120
S107
AUDIO MONITOR
PCM
MIX
STD
IC101
IC102
D111
Q101
CN105
J102
D110
(SHASSIS)
LINE IN 2
J102
S VIDEO
11
20
6
7
8
9
10
11
12
13

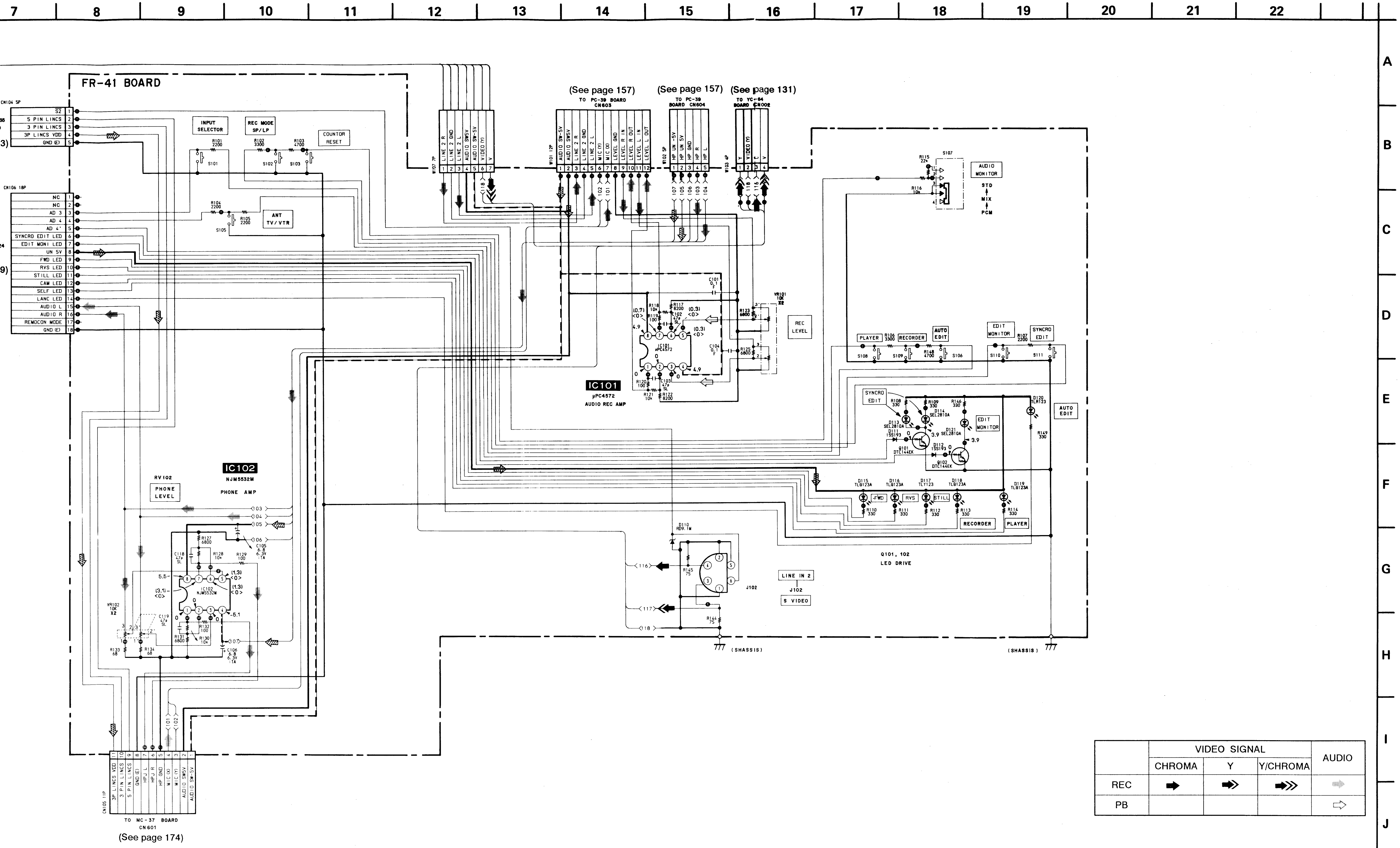
## MODE CONTROL MODE CONTROL

## FR-41 (MODE CONTROL), FJ-2 (LINE IN 2) SCHEMATIC DIAGRAM

– Ref. No.: FR-41, FJ-2 Boards; 15,000 series –


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
A
B
C
D
E
F
G
H
I
J
FR-41 BOARD
FJ-2 BOARD
CN104 5P
S2
5 PIN LINCS
3 PIN LINCS
3P LINCS VDD
GND (E)
TO DS-36 BOARD CN001
(See page 153)
CN106 18P
NC
NC
AD 3
AD 4
AD 4'
SYNCRO EDIT LED
EDIT MONI LED
UN 5V
FWD LED
RVS LED
STILL LED
CAM LED
SELF LED
LANC LED
AUDIO L
AUDIO R
REMOCON MODE
GND (E)
TO FL-24 BOARD CN004
(See page 179)
INPUT SELECTOR
REC MODE SP/LP
COUNTOR RESET
ANT TV/VTR
R101 2200
R102 3300
R103 4700
R104 2200
R105 2200
S101
S102
S103
S105
W107 7P
LINE 2 R
LINE 2 GND
LINE 2 L
AUDIO SW5V
AUDIO SW-5V
VIDEO (Y)
V
(See page 157)
TO PC-39 BOARD CN603
W101 12P
AUDIO SW-5V
AUDIO SW5V
LINE 2 R
LINE 2 GND
LINE 2 L
MIC (Y)
MIC (X)
LEVEL GND
LEVEL R IN
LEVEL R OUT
LEVEL L IN
LEVEL L OUT
(See page 157)
TO PC-39 BOARD CN604
W102 5P
HP UN -5V
HP UN 5V
HP GND
HP R
HP L
(See page 131)
TO YC-84 BOARD CN002
W103 4P
Y
VIDEO (Y)
C
V
IC101
μPC4572
AUDIO REC AMP
C101 0.1 F
R117 8200
R118 10k
R119 100
C102 47p SL
R120 100
C103 47p SL
R121 10k
R122 8200
R123 6800
R125 6800
C104 0.1 F
VR101 10K X2
REC LEVEL
IC102
NJM5532M
PHONE AMP
RV102
PHONE LEVEL
R127 6800
R128 10k
R129 100
C105 6.8 6.3V :TA
C106 6.8 6.3V :TA
C118 47p SL
C119 47p SL
R130 10k
R131 6800
R132 100
R133 68
R134 68
VR102 10K X2
D110 RD9.1M
R145 75
R144 75
J102
LINE IN 2
S VIDEO
(SHASSIS)
W108 7P
IC103
μPC4572
AUDIO AMP
C107 6.8 6.3V :TA
C108 6.8 6.3V :TA
C109 47p SL
C110 47p SL
R135 10
R136 220k
R137 220k
R138 220k
R139 220k
R140 10k
R141 10k
R142 220k
R143 220k
R150 75
C111 100p SL
C112 100p SL
C113 16V :TA
C114 16V :TA
C115 100p SL
C116 100p SL
C117 1000p B
C120 16V :TA
C121 16V :TA
D101 1S2835
J101
VIDEO
LINE IN 2
L
AUDIO
R
CN105 11P
3P LINCS VDD
3 PIN LINCS
5 PIN LINCS
GND (E)
HPJ L
HPJ R
HP GND
MIC (X)
MIC (Y)
AUDIO SW5V
AUDIO SW-5V
TO MC-37 BOARD CN601
(See page 174)

**MODE CONTROL MODE**

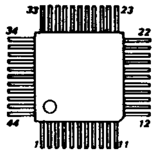

7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
A
B
C
D
E
F
G
H
I
J
FR-41 BOARD
CN104 5P
S2
5 PIN LINCS
3 PIN LINCS
3P LINCS VDD
GND (E)
CN106 18P
NC
NC
AD 3
AD 4
AD 4'
SYNCRO EDIT LED
EDIT MONI LED
UN 5V
FWD LED
RVS LED
STILL LED
CAM LED
SELF LED
LANC LED
AUDIO L
AUDIO R
REMOCON MODE
GND (E)
INPUT SELECTOR
REC MODE SP/LP
COUNTOR RESET
ANT TV/VTR
R101 2200
S101
R102 3300
R103 4700
S102
S103
R104 2200
R105 2200
S105
W107 7P
LINE 2 R
LINE 2 GND
LINE 2 L
AUDIO SW5V
AUDIO SW-5V
VIDEO (Y)
V
(See page 157)
TO PC-39 BOARD CN603
W101 12P
AUDIO SW-5V
AUDIO SW5V
LINE 2 R
LINE 2 GND
LINE 2 L
MIC (Y)
MIC (X)
LEVEL GND
LEVEL R IN
LEVEL R OUT
LEVEL L IN
LEVEL L OUT
(See page 157)
TO PC-39 BOARD CN604
W102 5P
HP UN -5V
HP UN 5V
HP GND
HP R
HP L
(See page 131)
TO YC-84 BOARD CN002
W103 4P
Y
VIDEO (Y)
C
V
R115 22k
R116 10k
S107
AUDIO MONITOR
STD
MIX
PCM
C101 0.1 F
R118 10k
R117 8200
R119 100
C102 47p SL
VR101 10K X2
R123 6800
R125 6800
C104 0.1 F
REC LEVEL
IC101 µPC4572
R120 100
C103 47p SL
R121 10k
R122 8200
IC101
µPC4572
AUDIO REC AMP
PLAYER
R106 3300
RECORDER
AUTO EDIT
S108
S109
R148 4700
S106
EDIT MONITOR
R107 2200
SYNCRO EDIT
S110
S111
SYNCRO EDIT
R108 330
R109 330
R146 330
D114 SEL2810A
D113 SEL2810A
D111 1SS193
EDIT MONITOR
D121 SEL2810A
Q101 DTC144EK
D112 1SS193
Q102 DTC144EK
D120 TLR123
R149 330
AUTO EDIT
D115 TLB123A
D116 TLB123A
D117 TLY123
D118 TLB123A
D119 TLB123A
FWD
RVS
STILL
R110 330
R111 330
R112 330
R113 330
R114 330
RECORDER
PLAYER
Q101, 102
LED DRIVE
D110 RD9.1M
R145 75
R144 75
J102
LINE IN 2
J102
S VIDEO
(SHASSIS)
(SHASSIS)
IC102
NJM5532M
PHONE AMP
RV102
PHONE LEVEL
R127 6800
C118 47p SL
R128 10k
R129 100
C105 6.8 6.3V :TA
IC102 NJM5532M
VR102 10K X2
C119 47p SL
R132 100
R131 6800
R130 10k
C106 6.8 6.3V :TA
R133 68
R134 68
CN105 11P
3P LINCS VDD
3 PIN LINCS
5 PIN LINCS
GND (E)
HPJ L
HPJ R
HP GND
MIC (X)
MIC (Y)
AUDIO SW5V
AUDIO SW-5V
TO MC-37 BOARD CN601
(See page 174)

|  | VIDEO SIGNAL |  |  | AUDIO |
|---|---|---|---|---|
|  | CHROMA | Y | Y/CHROMA |  |
| REC | ➡ | ➡ | ➡ | ➡ |
| PB |  |  |  | ⇨ |

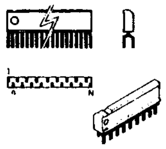
# MODE CONTROL MODE CONTROL

## 5-3. SEMICONDUCTORS

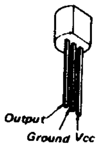
**CXA1449Q**


33
23
34
22
44
12
1
11

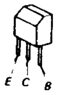
**M5M4C500L-10**



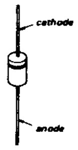
**TL431CLP**


Output
Ground
Vcc

**2SB733-2**
**2SD773**



**RU-3AM**


cathode
anode

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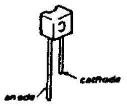
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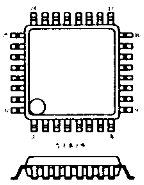

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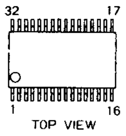
32
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TOP VIEW

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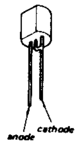
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cathode

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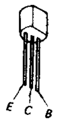

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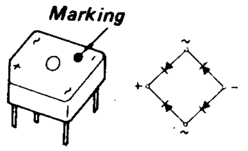

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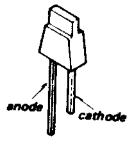
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cathode

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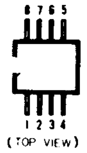
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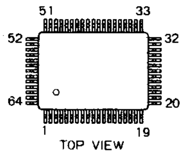
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TOP VIEW

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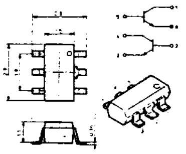

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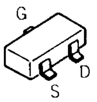

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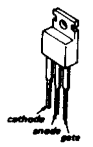
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anode
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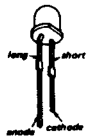
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cathode

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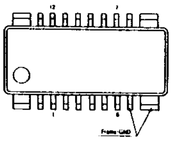

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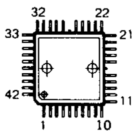
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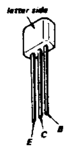
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E
C
B

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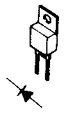

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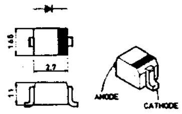
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CATHODE

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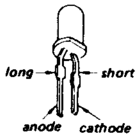
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cathode

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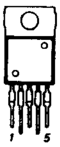

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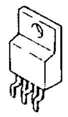

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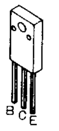

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**RD7.5ES-B2**
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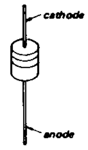
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anode

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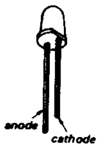
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cathode

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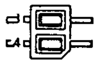

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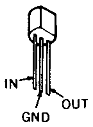

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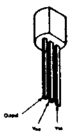

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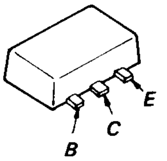

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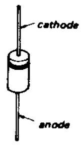
**1SS83**
**20E2H**


cathode
anode

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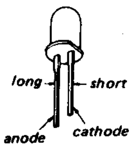

long
short
anode
cathode

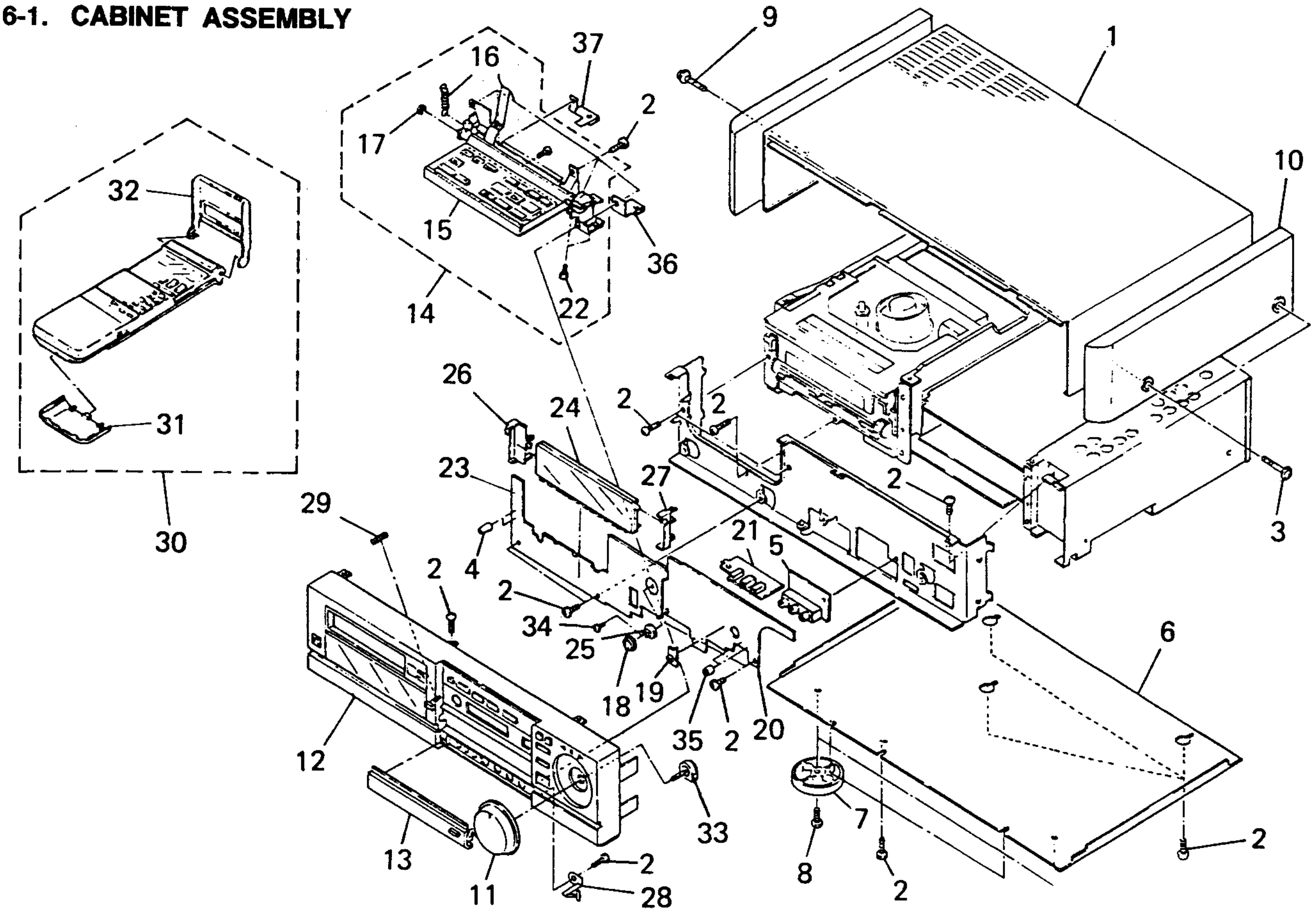
# SECTION 6
# EXPLODED VIEWS

**NOTE:**

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.

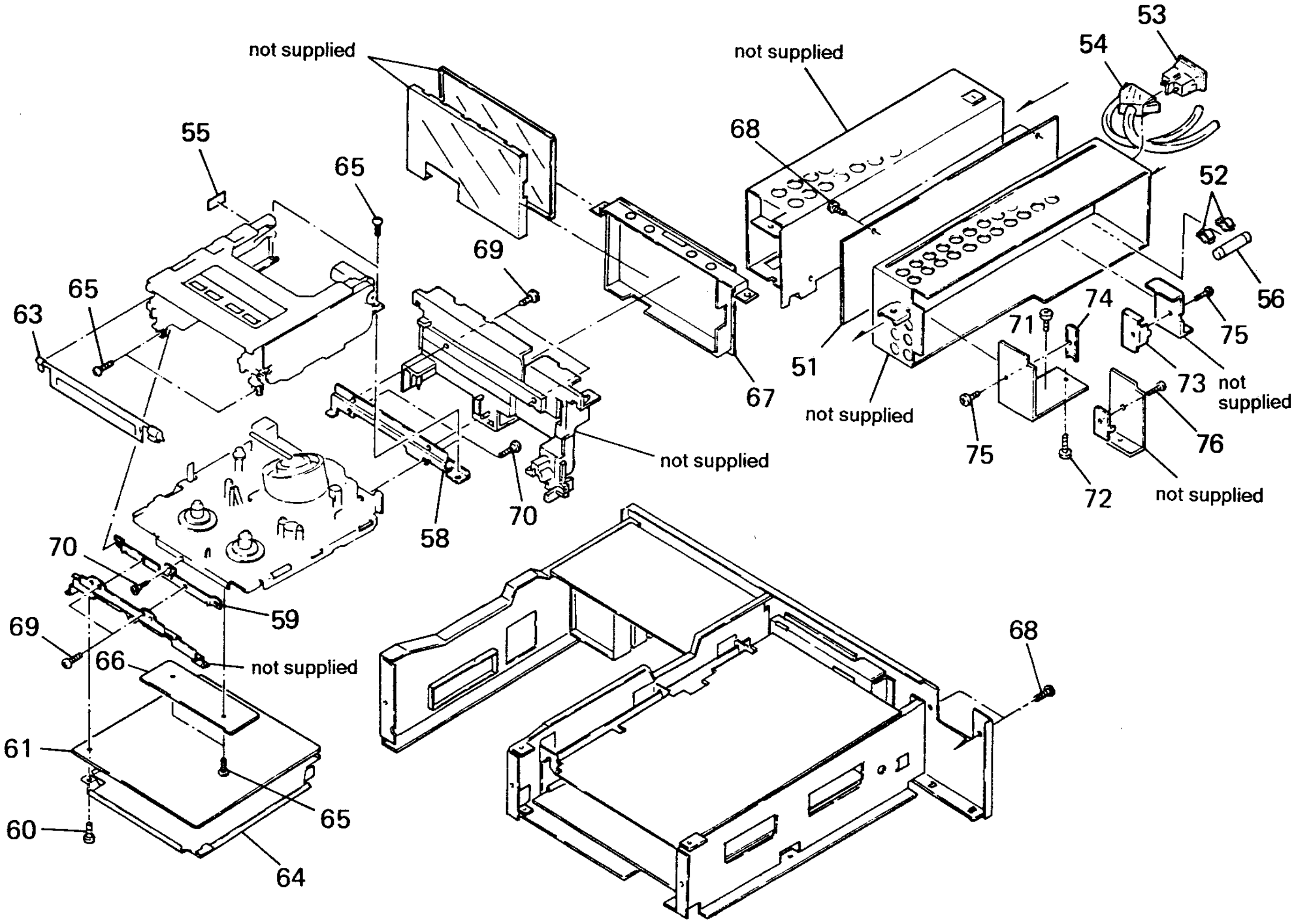
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

## 6-1. CABINET ASSEMBLY



| No. | Part No. | Description | Remark |
|---|---|---|---|
| 1 | X-3742-504-1 | CASE ASSY, UPPER (AEP) | |
| | X-3742-516-1 | CASE ASSY, UPPER (UK) | |
| 2 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 IT-3 | |
| 3 | 3-721-342-11 | SCREW (3), SIDE WOOD (AEP) | |
| | 4-886-821-01 | SCREW, M3 CASE (UK) | |
| 4 | *3-697-607-01 | HOLDER, (SU), LED | |
| 5 | *A-7061-890-A | FJ-2 BOARD, COMPLETE | |
| 6 | *3-742-559-01 | PLATE, BOTTOM | |
| 7 | X-3713-423-1 | FOOT ASSY (G) (AEP) | |
| | X-4922-508-1 | FOOT ASSY (UK) | |
| | 4-922-942-01 | FOOT (FELT) | |
| 8 | 3-721-343-01 | SCREW, FIXED, M4X7 | |
| 9 | X-3742-505-1 | PLATE (L) ASSY, SIDE (AEP) | |
| 10 | X-3742-506-1 | PLATE (R) ASSY, SIDE (AEP) | |
| 11 | X-3742-501-1 | DIAL BLOCK ASSY (AEP) | |
| | X-3742-514-1 | DIAL BLOCK ASSY (UK) | |
| 12 | X-3742-509-1 | PANEL ASSY, FRONT (AEP) | |
| | X-3742-517-1 | PANEL ASSY, FRONT (UK) | |
| 13 | X-3742-502-1 | DOOR ASSY, JACK (AEP) | |
| | X-3742-512-1 | DOOR ASSY, JACK (UK) | |
| 14 | A-7091-072-A | DOOR ASSY (AEP) | |
| | A-7091-194-A | DOOR ASSY (UK) | |
| 15 | 1-466-292-11 | SWITCH BLOCK, CONTROL (AEP) | |
| | 1-466-292-21 | SWITCH BLOCK, CONTROL (UK) | |
| 16 | 3-571-823-00 | SPRING, TENSION | |
| 17 | 7-624-105-04 | STOP RING 2.3, TYPE -E | |
| 18 | 3-742-501-01 | KNOB, HP | |
| 19 | 3-742-502-01 | KNOB, SLIDE | |
| 20 | *A-7061-812-A | FR-41 (A) BOARD, COMPLETE | |
| 21 | *A-7061-813-A | MC-37 BOARD, COMPLETE | |
| 22 | 7-621-772-30 | SCREW +B 2X6 | |
| 23 | *A-7061-811-A | FL-24 BOARD, COMPLETE (AEP) | |
| | A-7062-055-A | FL-24(C) BOARD, COMPLETE (UK) | |
| 24 | 1-519-507-31 | INDICATOR TUBE, FLUORESCENT (ND001) | |
| 25 | 3-731-123-01 | BASE, VOLUME | |
| 26 | *3-742-524-01 | HOLDER (LEFT), INDICATION TUBE | |
| 27 | *3-742-548-01 | HOLDER (RIGHT), INDICATION TUBE | |
| 28 | 3-742-513-01 | SPRING, LEAF | |
| 29 | 3-554-017-00 | SPRING, COMPRESSION | |
| 30 | A-6768-153-A | COMMANDER ASSY | |
| 31 | 2-181-766-01 | COVER, BATTERY | |
| 32 | 2-181-770-11 | COVER, TIMER | |
| 33 | 1-238-738-11 | RES, VAR, CARBON 10K | |
| 34 | 7-627-552-38 | SCREW, PRECISION +P 1.7X3 | |
| 35 | *3-689-521-01 | HOLDER, LED, ROUND | |
| 36 | *3-742-574-01 | PLATE (R), GROUND, DOOR | |
| 37 | *3-742-575-01 | PLATE (L), GROUND, DOOR | |

## 6-2. MAIN CHASSIS ASSEMBLY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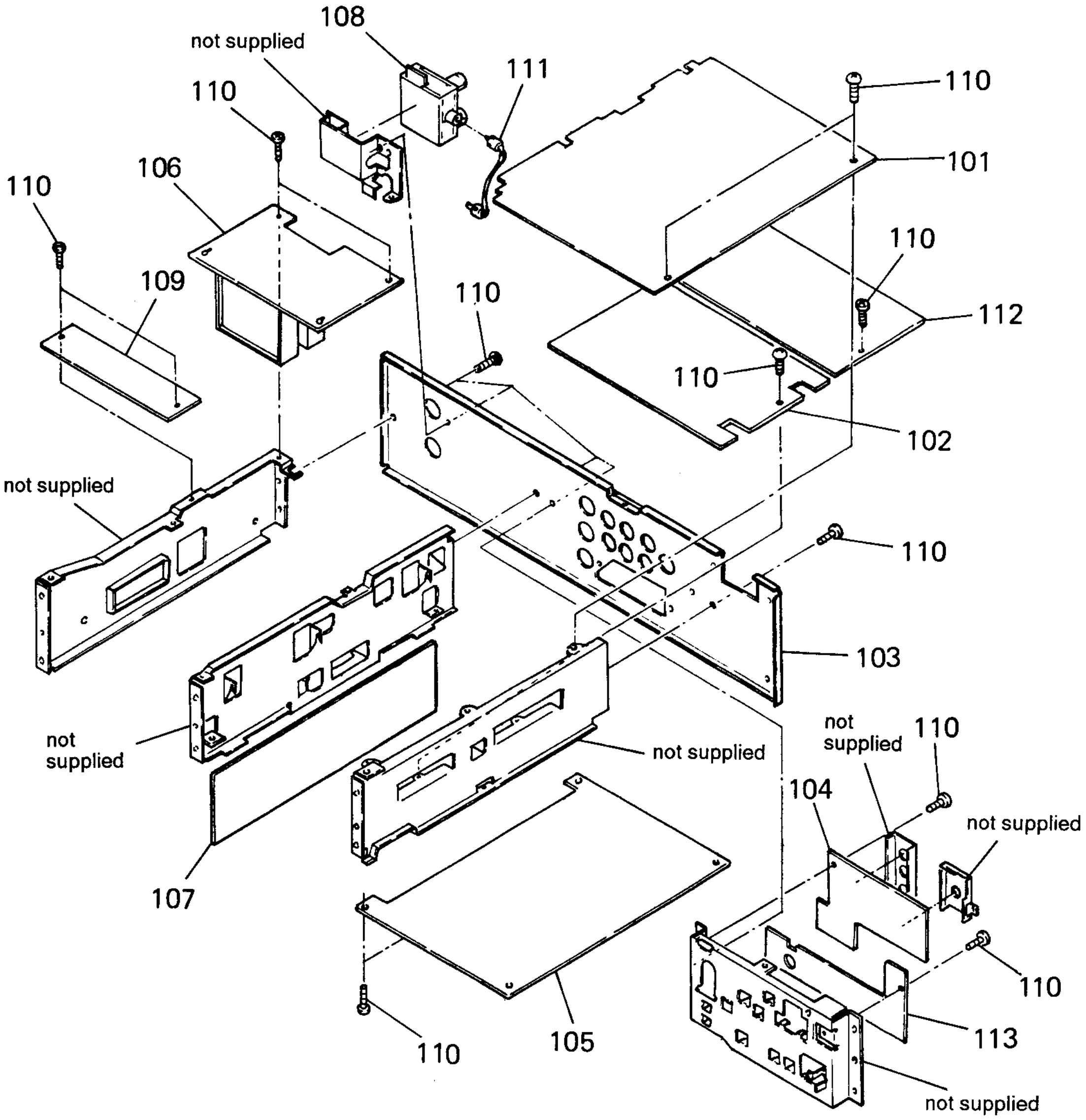
76
not supplied
70
58
72
not supplied
70
59
68
69
66
not supplied
61
65
60
64

| No. | Part No. | Description | Remark |
|---|---|---|---|
| 51 | *A-7061-815-A | PS-196 (A) BOARD, COMPLETE (AEP) | |
| | *A-7061-898-A | PS-196 (B) BOARD, COMPLETE (UK) | |
| 52 | ⚠1-533-183-11 | HOLDER, FUSE | |
| 53 | ⚠1-540-054-11 | INLET, AC | |
| 54 | ⚠3-742-521-01 | COVER, 2P INLET | |
| 55 | *3-730-176-11 | SHEET, MD | |
| 56 | ⚠1-532-259-00 | FUSE, TIMER-LAG (1.6A 250V) | |
| 58 | *3-732-811-01 | BRACKET (REAR) | |
| 59 | *3-732-810-02 | BRACKET (FRONT) | |
| 60 | 3-713-790-01 | SCREW (M2X6), TAPPING, P3 | |
| 61 | *A-7061-807-A | CM-15 (A) BOARD, COMPLETE | |
| 63 | X-3742-507-1 | DOOR ASSY, CASSETTE COMPARTMENT | |
| 64 | *3-742-576-01 | PLATE, SHIELD, MD | |
| 65 | 3-732-817-01 | SCREW (2X4.5), TAPPING | |
| 66 | *1-633-519-11 | UC-4 BOARD | |
| 67 | *A-7061-808-A | RP-74 (A) BOARD, COMPLETE | |
| 68 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 IT-3 | |
| 69 | 7-627-553-47 | PRECISION SCREW +P 2X4 TYPE 3 | |
| 70 | 3-732-816-01 | SCREW, STEP | |
| 71 | 7-685-647-79 | SCREW +BVTP 3X10 | |
| 72 | *3-714-460-01 | RETAINER, TRANSISTOR | |
| 73 | 3-731-146-01 | RETAINER, (B), PS | |
| 74 | 3-731-147-01 | RETAINER, (A), PS | |
| 75 | 7-628-253-40 | SCREW +PS 2X10 | |
| 76 | 7-621-555-60 | SCREW +K 2X10 | |

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

## 6-3. MAIN BOARD ASSEMBLY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107
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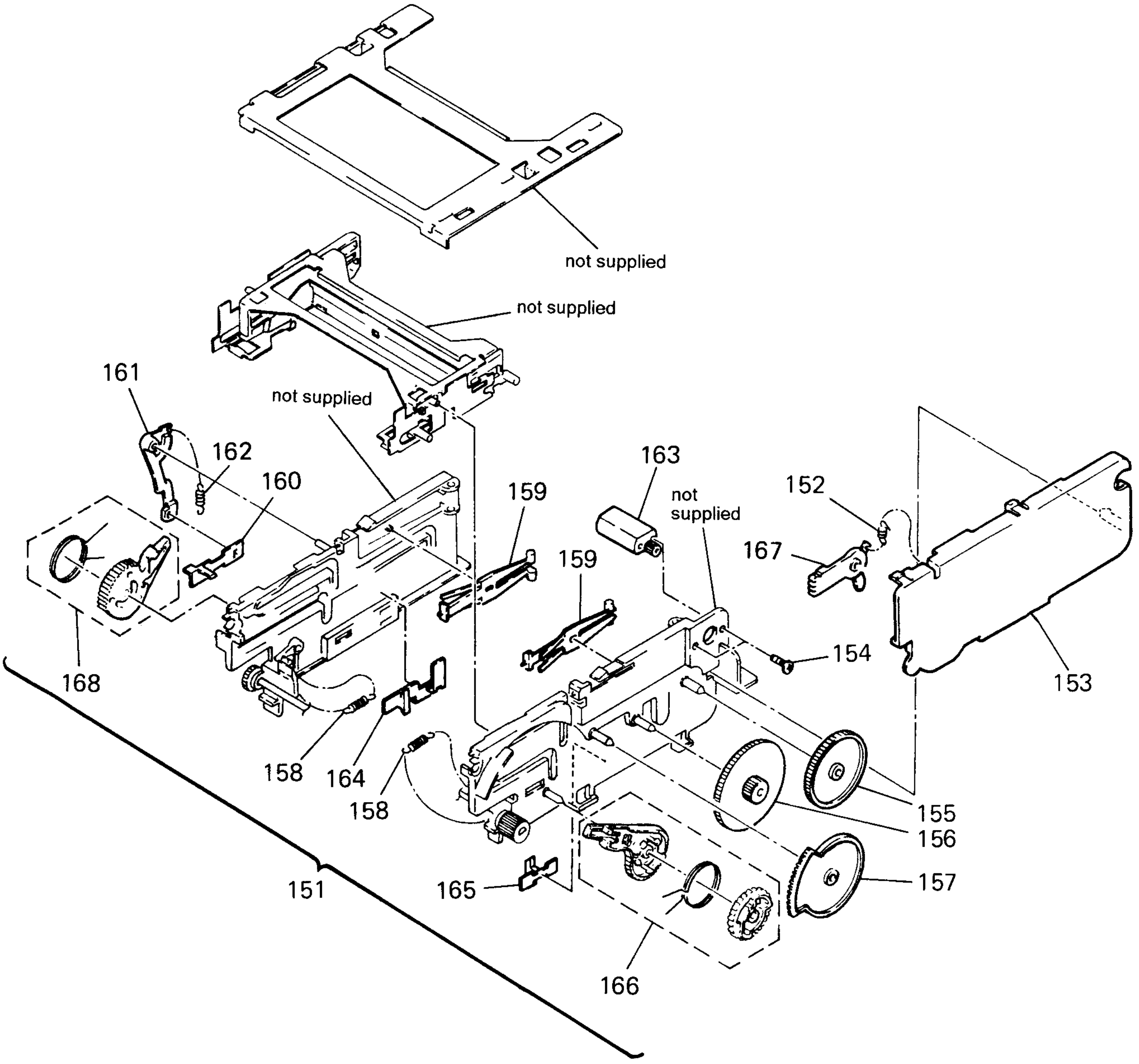
113
110
105
not supplied

| No. | Part No. | Description | Remark |
|---|---|---|---|
| 101 | *A-7061-810-A | VI-65 (A) BOARD, COMPLETE | |
| 102 | *A-7061-940-A | PC-39 (A) BOARD, COMPLETE | |
| 103 | 3-742-564-01 | FRAME, REAR (AEP) | |
| 104 | *A-7061-805-A | RJ-5 BOARD, COMPLETE | |
| 105 | *A-7061-816-A | DS-35 (A) BOARD, COMPLETE (AEP) | |
| | *A-7061-892-A | DS-35 (B) BOARD, COMPLETE (UK) | |
| 106 | *A-7061-814-A | TU-100 BOARD, COMPLETE (AEP) | |
| | *A-7061-897-A | TU-100 (C) BOARD, COMPLETE (UK) | |
| 107 | *1-633-526-11 | IN-24 BOARD | |
| 108 | 1-466-199-11 | MODULATOR, RF (RFU-2010) (AEP) | |
| | 1-466-206-11 | MODULATOR, RF (RFU-2011) (UK) | |
| 109 | *A-7061-899-A | NM-2 (A) BOARD, COMPLETE (UK) | |
| 110 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 IT-3 | |
| 111 | 1-555-110-00 | CABLE, PIN | |
| 112 | *A-7061-896-A | YC-64 (B) BOARD, COMPLETE (UK) | |
| | *A-7061-900-A | YC-64 (A) BOARD, COMPLETE (AEP) | |
| 113 | *A-7061-806-A | RJ-6 BOARD, COMPLETE | |

## 6-4. CASSETTE COMPARTMENT ASSEMBLY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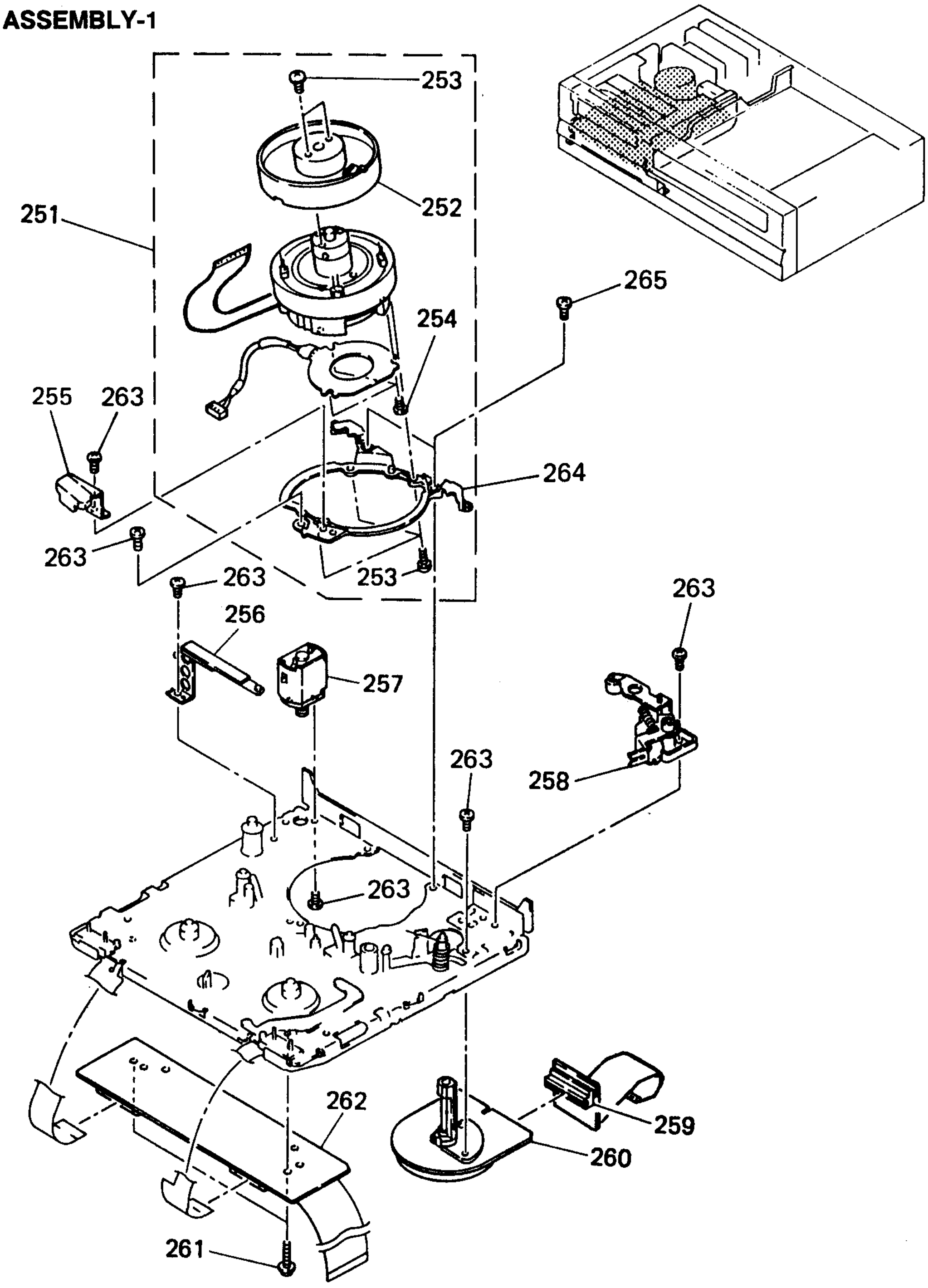
166

| No. | Part No. | Description | Remark |
|---|---|---|---|
| 151 | A-7090-892-A | CASSETTE COMPARTMENT ASSY, FL | |
| 152 | 3-731-175-02 | SPRING, TENSION | |
| 153 | 3-732-804-03 | COVER, GEAR | |
| 154 | 3-730-141-01 | SCREW (PSW) (2X4) | |
| 155 | 3-731-182-01 | GEAR (B), DECELERATION | |
| 156 | 3-731-181-01 | GEAR (A), DECELERATION | |
| 157 | 3-731-192-01 | GEAR, MIDWAY | |
| 158 | 3-731-176-02 | SPRING, TENSION | |
| 159 | 3-731-184-02 | HOLDER LOCK | |
| 160 | 3-731-189-01 | SLIDER, LOCK | |
| 161 | 3-731-188-01 | ARM LOCK, DRIVING | |
| 162 | 3-731-174-01 | SPRING, TENSION | |
| 163 | X-3731-108-1 | MOTOR ASSY | |
| 164 | X-3726-867-1 | PRISM (LEFT) ASSY | |
| 165 | X-3726-866-1 | PRISM (RIGHT) ASSY | |
| 166 | X-3731-109-2 | ARM (RIGHT) ASSY, DRIVING | |
| 167 | 3-731-185-01 | LINK, SWITCHING, DOOR | |
| 168 | X-3731-111-1 | ARM (LEFT) ASSY, DRIVING | |

## 6-5. MD BLOCK ASSEMBLY-1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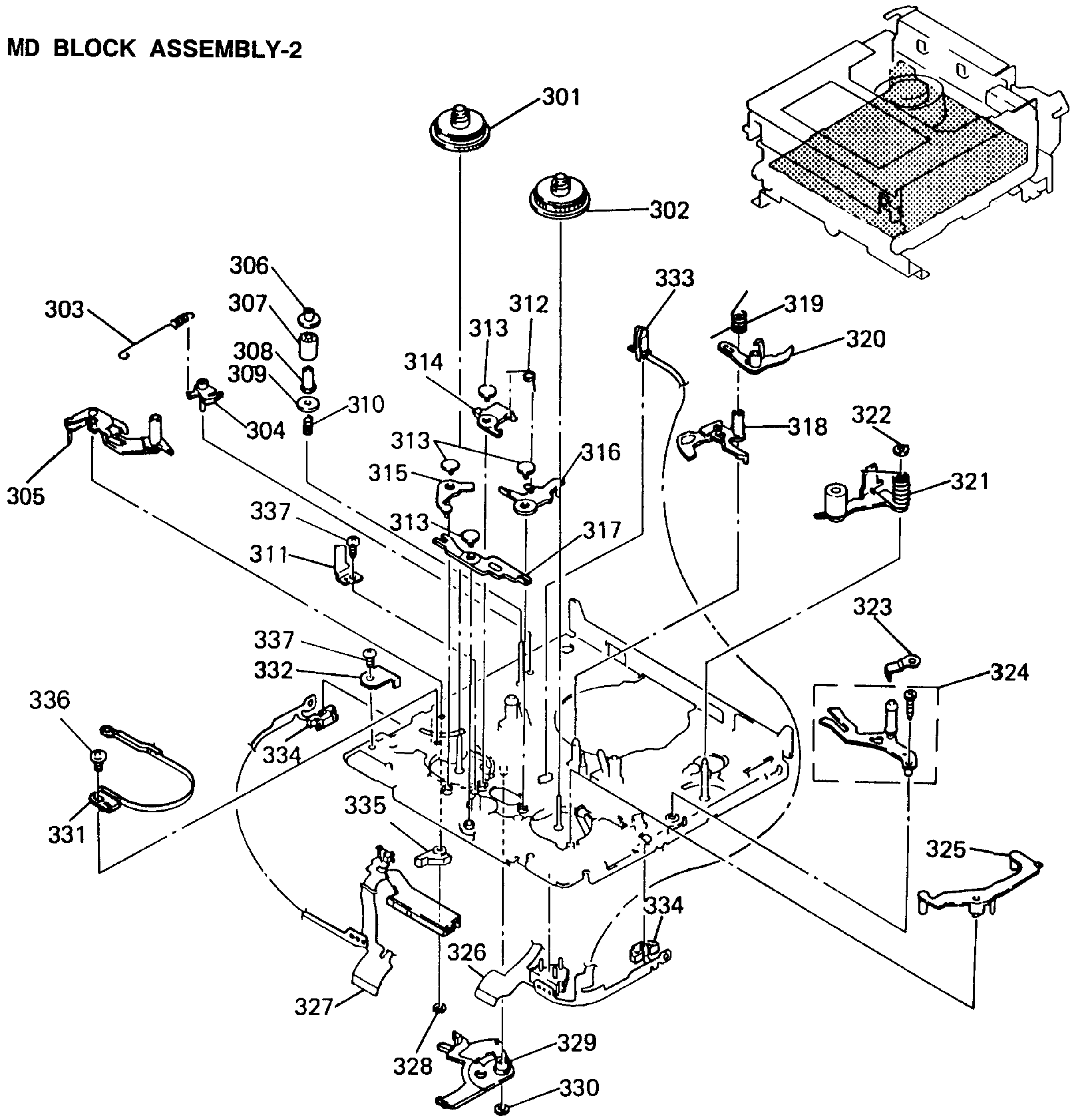
261

| No. | Part No. | Description | Remark |
|---|---|---|---|
| 251 | A-7048-339-A | DRUM ASSY (DGU-58A-R) | |
| 252 | A-7049-293-A | DRUM ASSY, UPPER, ROTARY (DGR-58-R) | |
| 253 | 3-686-493-01 | SCREW (M2X5), P1 | |
| 254 | 3-686-458-02 | SCREW (P1.4X2.5) TAPPING | |
| 255 | 3-728-868-01 | GUARD, GUIDE | |
| 256 | 1-535-739-12 | TERMINAL, SHAFT EARTH | |
| 257 | A-7040-160-A | MOTOR ASSY, THREADING | |
| 258 | A-7040-161-B | ROLLER BLOCK ASSY, HC | |
| 259 | *1-633-518-11 | CC-26 BOARD | |
| 260 | 8-835-331-01 | MOTOR, DC U-22A | |
| 261 | 3-732-817-01 | SCREW (2X4.5), TAPPING | |
| 262 | *1-633-519-11 | UC-4 BOARD | |
| 263 | 3-728-998-01 | SCREW (M2X3), SPECIAL HEAD | |
| 264 | X-3686-474-4 | BASE ASSY, DRUM | |
| 265 | 3-736-406-01 | SCREW (3) (M2X10) | |

## 6-6. MD BLOCK ASSEMBLY-2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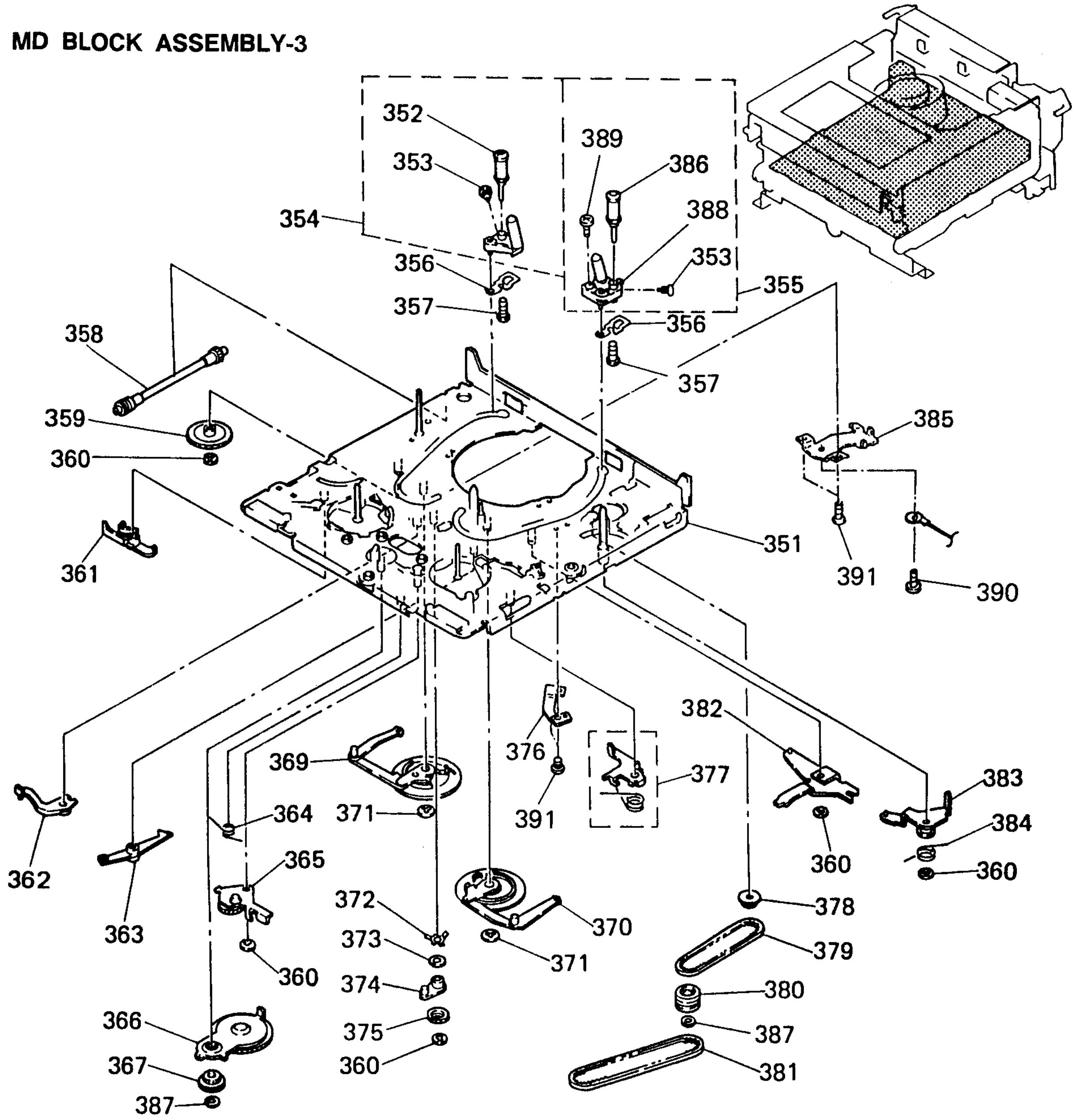
| No. | Part No. | Description | Remark |
|---|---|---|---|
| 301 | X-3728-851-1 | TABLE ASSY, REEL, S | |
| 302 | X-3728-855-1 | TABLE ASSY, REEL, T | |
| 303 | 3-736-414-01 | SPRING, TENSION | |
| 304 | 3-728-855-03 | ARM, ADJUSTMENT | |
| 305 | X-3728-867-1 | ARM ASSY (S), TENSION REGULATOR | |
| 306 | 3-726-884-01 | FLANGE, UPPER, TG2 | |
| 307 | 3-726-883-01 | ROLLER, TG2 | |
| 308 | 3-726-885-01 | SLEEVE, TG2 | |
| 309 | 3-726-882-02 | FLANGE, LOWER, TG2 | |
| 310 | 3-726-886-01 | SPRING, COMPRESSION | |
| 311 | 3-726-848-01 | RETAINER, TL | |
| 312 | 3-726-866-01 | SPRING (ST), TORSION | |
| 313 | 3-726-858-01 | PIN, SHAFT RETAINER | |
| 314 | 3-728-849-01 | BRAKE, S | |
| 315 | 3-726-852-01 | BRAKE, LB | |
| 316 | 3-728-850-01 | BRAKE, T | |
| 317 | 3-726-853-01 | LEVER, LB | |
| 318 | 3-728-875-01 | STOPPER, RK | |
| 319 | 3-726-864-01 | SPRING (RK), TORSION | |
| 320 | 3-728-852-02 | ARM, RK STOPPER | |
| 321 | A-7040-163-B | ARM BLOCK ASSY, PINCH | |
| 322 | 3-669-465-00 | WASHER (1.5), STOPPER | |
| 323 | 3-728-808-01 | SPRING, LEAF | |
| 324 | X-3726-822-1 | ARM ASSY, TG7 | |
| 325 | 3-728-848-01 | ARM, LB RELEASE | |
| 326 | 1-628-061-12 | FP-90 FLEXIBLE BOARD | |
| 327 | 1-633-660-11 | FP-237 FLEXIBLE BOARD | |
| 328 | 3-321-393-11 | WASHER, STOPPER | |
| 329 | X-3728-863-1 | LEVER ASSY, SW | |
| 330 | 3-726-829-01 | WASHER, STOPPER | |
| 331 | X-3726-809-2 | BAND ASSY, TENSION REGULATOR | |
| 332 | 3-730-125-01 | RETAINER, SW | |
| 333 | 3-728-837-01 | HOLDER, LED | |
| 334 | 3-728-869-02 | HOLDER, SENSOR | |
| 335 | X-3728-857-1 | STOPPER ASSY, TENSION REGULATOR | |
| 336 | 3-728-998-01 | SCREW (M2X3), SPECIAL HEAD | |
| 337 | 7-627-555-88 | SCREW (M1.4X1.8) | |

## 6-7. MD BLOCK ASSEMBLY-3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| No. | Part No. | Description | Remark |
|---|---|---|---|
| 351 | *X-3728-801-1 | CHASSIS ASSY, MECHANICAL | |
| 352 | X-3728-808-1 | ROLLER ASSY (U) (SUS), GUIDE | |
| 353 | 3-726-822-01 | SCREW (M1.4X2) (STEP), HEAD | |
| 354 | A-7040-204-A | COASTER (LEFT) BLOCK ASSY | |
| 355 | A-7040-215-A | COASTER (RIGHT)BLOCK ASSY(N1S) | |
| | A-7040-220-A | COASTER (RIGHT) BLOCK ASSY-N1P | |
| 356 | 3-736-485-01 | SPRING, LEAF, COSTER | |
| 357 | 3-726-830-01 | SCREW (M1.4X4) (THREE LOCK) | |
| 358 | X-3726-807-1 | WORM ASSY | |
| 359 | 3-726-826-01 | GEAR, WHEEL | |
| 360 | 3-726-829-01 | WASHER, STOPPER | |
| 361 | 3-728-842-01 | LEVER, EJECT | |
| 362 | 3-728-851-01 | BRAKE, UL | |
| 363 | 3-726-854-01 | ARM, BRAKE RELEASE | |
| 364 | 3-726-865-01 | SPRING (LB), TORSION | |
| 365 | A-7040-130-A | GEAR BLOCK ASSY, LB | |
| 366 | X-3726-802-2 | GEAR ASSY, RK | |
| 367 | X-3726-812-1 | GEAR ASSY, RC | |
| 369 | X-3728-842-1 | GEAR (LEFT) ASSY, DRIVE | |
| 370 | X-3728-843-1 | GEAR (RIGHT) ASSY, DRIVE | |
| 371 | 3-669-465-00 | WASHER (1.5), STOPPER | |
| 372 | 3-726-867-01 | SPRING, LEAF | |
| 373 | 3-701-436-21 | WASHER, POLYEHTHYLENE | |
| 374 | 3-726-857-02 | ARM, UL | |
| 375 | 3-726-856-02 | GEAR, UL | |
| 376 | *3-726-805-01 | REINFORCEMENT (TT) | |
| 377 | X-3726-808-2 | BRAKE ASSY, TS | |
| 378 | X-3726-805-1 | GEAR ASSY, JOINT | |
| 379 | 3-728-866-11 | BELT (S), TIMING | |
| 380 | X-3726-838-1 | PULLEY (UPPER) ASSY, MIDWAY | |
| 381 | 3-728-865-11 | BELT (L), TIMING | |
| 382 | X-3728-846-1 | LEVER ASSY, LOADING | |
| 383 | X-3726-824-1 | ARM ASSY, PINCH SUB | |
| 384 | 3-726-895-01 | SPRING | |
| 385 | X-3726-841-1 | REINFORCEMENT (SS) ASSY | |
| 386 | X-3728-810-1 | ROLLER ASSY (U)(PLATING), GUIDE | |
| 387 | 3-321-393-11 | WASHER, STOPPER | |
| 388 | X-3728-852-1 | COASTER (RIGHT) ASSY | |
| 389 | 3-736-473-01 | SCREW (M2X0.25) (THREE LOCK) | |
| 390 | 3-703-502-01 | SCREW (1.4X1.6) | |
| 391 | 7-627-555-88 | SCREW (M1.4X1.8) | |

# EV-S1000E

**RJ-5** **RJ-6**

**CM-15**

## SECTION 7
## ELECTRICAL PARTS LIST

**NOTE:**

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some differences from the original one.
- SEMICONDUCTORS
  In each case, U: μ, for example:
  UA. . . : μA. . . , UPA. . . : μPA. . . ,
  UPB. . . : μPB. . . , UPC. . . : μPC. . . ,
  UPD. . . : μPD. . .
- CAPACITORS
  MF: μF, PF: μμF
- COILS
  MMH: mH, UH: μH

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| | *A-7061-805-A | RJ-5 BOARD, COMPLETE<br>******************** | |
| | | CAPACITOR | |
| C501 | 1-163-009-11 | CERAMIC CHIP 0.001MF 10% 50V | |
| C502 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C503 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C504 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C505 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C506 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C507 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C508 | 1-163-009-11 | CERAMIC CHIP 0.001MF 10% 50V | |
| C509 | 1-163-009-11 | CERAMIC CHIP 0.001MF 10% 50V | |
| C510 | 1-163-009-11 | CERAMIC CHIP 0.001MF 10% 50V | |
| C511 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C512 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C513 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C514 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C515 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C516 | 1-163-017-00 | CERAMIC CHIP 0.0047MF 10% 50V | |
| C517 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C518 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| | | CONNECTOR | |
| CN501 | 1-563-623-11 | CONNECTOR, FLEXIBLE 20P | |
| | | JACK | |
| CNJ501 | 1-568-212-11 | JACK 3P (LINE IN 1) | |
| CNJ502 | 1-568-212-11 | JACK 3P (LINE OUT) | |
| CNJ503 | 1-566-850-31 | CONNECTOR, (S) TERMINAL 4P (MONITOR OUT) | |
| CNJ504 | 1-562-589-11 | SOCKET, DIN (SMALL TYPE) 5P (CONTROL L LANC) | |
| CNJ505 | 1-566-850-31 | CONNECTOR, (S) TERMINAL 4P (LINE IN 1/S VIDEO) | |
| CNJ506 | 1-566-850-31 | CONNECTOR, (S) TERMINAL 4P (LINE OUT/S VIDEO) | |
| | | DIODE | |
| D501 | 8-719-106-43 | DIODE RD9.1M-B1 | |
| D510 | 8-719-106-43 | DIODE RD9.1M-B1 | |
| D511 | 8-719-106-43 | DIODE RD9.1M-B1 | |
| D512 | 8-719-106-43 | DIODE RD9.1M-B1 | |
| D513 | 8-719-106-43 | DIODE RD9.1M-B1 | |
| D530 | 8-719-106-43 | DIODE RD9.1M-B1 | |
| | | JUMPER RESISTOR | |
| JR501 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR502 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR503 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR504 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| | | RESISTOR | |
| R501 | 1-216-022-00 | METAL GLAZE 75 5% 1/10W | |
| R502 | 1-216-022-00 | METAL GLAZE 75 5% 1/10W | |
| R504 | 1-216-022-00 | METAL GLAZE 75 5% 1/10W | |
| R505 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R506 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R507 | 1-216-043-00 | METAL GLAZE 560 5% 1/10W | |
| R508 | 1-216-043-00 | METAL GLAZE 560 5% 1/10W | |

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| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| | *A-7061-806-A | RJ-6 BOARD, COMPLETE<br>******************** | |
| | | CAPACITOR | |
| C601 | 1-163-009-11 | CERAMIC CHIP 0.001MF 10% 50V | |
| C602 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C603 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C604 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| C605 | 1-163-009-11 | CERAMIC CHIP 0.001MF 10% 50V | |
| C606 | 1-163-009-11 | CERAMIC CHIP 0.001MF 10% 50V | |
| C607 | 1-163-117-00 | CERAMIC CHIP 100PF 5% 50V | |
| | | JACK | |
| CNJ601 | 1-561-534-41 | SOCKET 21P | |
| | | DIODE | |
| D601 | 8-719-106-43 | DIODE RD9.1M-B1 | |
| D612 | 8-719-106-80 | DIODE RD13M-B2 | |
| | | RESISTOR | |
| R601 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R602 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| R604 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R605 | 1-216-043-00 | METAL GLAZE 560 5% 1/10W | |
| R606 | 1-216-043-00 | METAL GLAZE 560 5% 1/10W | |
| | | SWITCH | |
| S602 | 1-572-210-11 | SWITCH, SLIDE (COMMAND MODE) | |
| S603 | 1-554-481-00 | SWITCH, SLIDE (VIDEO OUT) | |

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| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| | *A-7061-807-A | CM-15 (A) BOARD, COMPLETE<br>************************ | |
| | | CAPACITOR | |
| C301 | 1-126-157-11 | ELECT 10MF 20% 16V | |
| C302 | 1-163-038-00 | CERAMIC CHIP 0.1MF 25V | |
| C303 | 1-126-157-11 | ELECT 10MF 20% 16V | |
| C304 | 1-163-038-00 | CERAMIC CHIP 0.1MF 25V | |
| C305 | 1-163-009-11 | CERAMIC CHIP 0.001MF 50V | |
| C306 | 1-163-009-11 | CERAMIC CHIP 0.001MF 50V | |
| C307 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | |
| C308 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | |
| C309 | 1-164-232-11 | CERAMIC CHIP 0.01MF 50V | |
| C310 | 1-163-017-00 | CERAMIC CHIP 0.0047MF 10% 50V | |
| C311 | 1-164-182-11 | CERAMIC CHIP 0.0033MF 10% 50V | |

| Ref.No | Part No. | Description | | Remark |
|---|---|---|---|---|
| C312 | 1-163-129-00 | CERAMIC CHIP 330PF | 5% | 50V |
| C313 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C314 | 1-163-809-11 | CERAMIC CHIP 0.047MF | 10% | 25V |
| C315 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C316 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C317 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C318 | 1-163-105-00 | CERAMIC CHIP 33PF | 5% | 50V |
| C319 | 1-163-105-00 | CERAMIC CHIP 33PF | 5% | 50V |
| C320 | 1-163-005-11 | CERAMIC CHIP 470PF | 10% | 50V |
| C321 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C322 | 1-163-109-00 | CERAMIC CHIP 47PF | 5% | 50V |
| C323 | 1-163-011-11 | CERAMIC CHIP 0.0015MF | 10% | 50V |
| C324 | 1-163-101-00 | CERAMIC CHIP 22PF | 5% | 50V |
| C325 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C326 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C327 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C328 | 1-162-638-11 | CERAMIC CHIP 1MF | | 16V |
| C329 | 1-163-005-11 | CERAMIC CHIP 470PF | 10% | 50V |
| C330 | 1-163-809-11 | CERAMIC CHIP 0.047MF | 10% | 25V |
| C331 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C333 | 1-163-809-11 | CERAMIC CHIP 0.047MF | 10% | 25V |
| C334 | 1-126-094-11 | ELECT 4.7MF | 20% | 25V |
| C337 | 1-126-162-11 | ELECT 3.3MF | 20% | 50V |
| C338 | 1-136-017-00 | CERAMIC CHIP 0.0047MF | | 50V |
| C339 | 1-136-017-00 | CERAMIC CHIP 0.0047MF | | 50V |
| C351 | 1-164-232-11 | CERAMIC CHIP 0.01MF | 10% | 50V |
| C354 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C355 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C356 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C357 | 1-163-227-00 | CERAMIC CHIP 10PF | 5% | 50V |
| C401 | 1-163-095-00 | CERAMIC CHIP 12PF | 5% | 50V |
| C402 | 1-163-095-00 | CERAMIC CHIP 12PF | 5% | 50V |
| C403 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C404 | 1-126-154-11 | ELECT 47MF | 20% | 6.3V |
| C405 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C406 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C407 | 1-162-638-11 | CERAMIC CHIP 1MF | | 16V |
| C408 | 1-162-638-11 | CERAMIC CHIP 1MF | | 16V |
| C409 | 1-126-154-11 | ELECT 47MF | 20% | 6.3V |
| C410 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C411 | 1-162-638-11 | CERAMIC CHIP 1MF | | 16V |
| C412 | 1-162-638-11 | CERAMIC CHIP 1MF | | 16V |
| C413 | 1-126-154-11 | ELECT 47MF | 20% | 6.3V |
| C414 | 1-163-017-00 | CERAMIC CHIP 0.0047MF | 10% | 50V |
| C415 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C416 | 1-126-094-11 | ELECT 4.7MF | 20% | 25V |
| C417 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C418 | 1-124-438-00 | ELECT 1MF | 20% | 50V |
| C419 | 1-164-182-11 | CERAMIC CHIP 0.0033MF | 10% | 50V |
| C420 | 1-164-182-11 | CERAMIC CHIP 0.0033MF | 10% | 50V |
| C422 | 1-126-094-11 | ELECT 4.7MF | 20% | 25V |
| C424 | 1-164-232-11 | CERAMIC CHIP 0.01MF | 10% | 50V |
| C425 | 1-164-330-21 | CERAMIC CHIP 0.22MF | 10% | 16V |

| Ref.No | Part No. | Description | | Remark |
|---|---|---|---|---|
| C426 | 1-164-330-21 | CERAMIC CHIP 0.22MF | 10% | 16V |
| C427 | 1-126-157-11 | ELECT 10MF | 20% | 16V |
| C428 | 1-124-638-11 | ELECT 22MF | 20% | 6.3V |
| C430 | 1-164-330-21 | CERAMIC CHIP 0.22MF | 10% | 16V |
| C431 | 1-164-330-21 | CERAMIC CHIP 0.22MF | 10% | 16V |
| C432 | 1-164-330-21 | CERAMIC CHIP 0.22MF | 10% | 16V |
| C433 | 1-164-330-21 | CERAMIC CHIP 0.22MF | 10% | 16V |
| C434 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C435 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C436 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C437 | 1-164-182-11 | CERAMIC CHIP 0.0033MF | 10% | 50V |
| C440 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C441 | 1-163-011-11 | CERAMIC CHIP 0.0015MF | 10% | 50V |
| C442 | 1-163-017-00 | CERAMIC CHIP 0.0047MF | 10% | 50V |
| C501 | 1-130-495-00 | MYLAR 0.1MF | 5% | 50V |
| C502 | 1-163-077-00 | CERAMIC CHIP 0.1MF | 10% | 25V |
| C503 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C504 | 1-163-019-00 | CERAMIC CHIP 0.0068MF | 10% | 50V |
| C505 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C506 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C507 | 1-163-077-00 | CERAMIC CHIP 0.1MF | 10% | 25V |
| C508 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C509 | 1-163-123-00 | CERAMIC CHIP 180PF | 5% | 50V |
| C510 | 1-163-077-00 | CERAMIC CHIP 0.1MF | 10% | 25V |
| C511 | 1-163-101-00 | CERAMIC CHIP 22PF | 5% | 50V |
| C512 | 1-163-101-00 | CERAMIC CHIP 22PF | 5% | 50V |
| C513 | 1-127-491-00 | ELECT(SOLID) 22MF | 20% | 10V |
| C514 | 1-124-589-11 | ELECT 47MF | 20% | 16V |
| C515 | 1-127-499-81 | ELECT(SOLID) 22MF | 20% | 16V |
| C516 | 1-163-101-00 | CERAMIC CHIP 22PF | 5% | 50V |
| C517 | 1-163-101-00 | CERAMIC CHIP 22PF | 5% | 50V |
| C518 | 1-127-491-00 | ELECT(SOLID) 22MF | 20% | 10V |
| C520 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |

### CONNECTOR

| | | |
|---|---|---|
| CN301 | *1-566-183-61 | PIN, CONNECTOR (PC BOARD) 4P |
| CN302 | *1-566-183-21 | PIN, CONNECTOR (PC BOARD) 4P |
| CN303 | 1-574-346-12 | CONNECTOR, FPC/FFC 15P |
| CN304 | 1-506-483-21 | PIN, CONNECTOR 4P |
| CN401 | 1-566-514-11 | CONNECTOR, FPC (ZIF) 14P |
| CN401 | 1-575-389-11 | CABLE, FLAT (1.0MM PITCH) 14P |
| CN402 | 1-575-361-11 | CONNECTOR, FPC/FFC 9P |
| CN402 | 1-575-388-11 | CABLE, FLAT (1.0MM PITCH) 9P |
| CN403 | *1-563-633-11 | CONNECTOR, FLEXIBLE 30P |
| CN403 | 1-575-455-11 | WIRE, FLAT TYPE (30 CORE) |
| CN405 | 1-575-368-11 | CONNECTOR, FPC/FFC 14P |
| CN406 | *1-566-181-61 | PIN, CONNECTOR (PC BOARD) 2P |
| CN407 | *1-566-181-21 | PIN, CONNECTOR (PC BOARD) 2P |

### DIODE

| | | |
|---|---|---|
| D401 | 8-719-400-18 | DIODE MA152WK |
| D409 | 8-719-200-36 | DIODE E10QS04 |
| D410 | 8-719-200-27 | DIODE E10DS2 |

When indicating parts by reference number, please include the board name.

# CM-15

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| D411 | 8-719-400-18 | DIODE MA152WK | |
| D413 | 8-719-400-18 | DIODE MA152WK | |
| D414 | 8-719-400-18 | DIODE MA152WK | |
| D501 | 8-719-938-75 | DIODE SB05-05CP | |
| D502 | 8-719-938-75 | DIODE SB05-05CP | |
| D503 | 8-719-104-34 | DIODE 1S2836 | |

### FERRITE BEAD

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| FB401 | 1-543-256-11 | BEAD, FERRITE | |
| FB402 | 1-543-256-11 | BEAD, FERRITE | |

### IC

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| IC301 | 8-752-050-54 | IC CXA1449Q | |
| IC302 | 8-759-100-97 | IC UPC339G2 | |
| IC303 | 8-759-710-07 | IC NJM2234M | |
| IC401 | 8-752-810-99 | IC CXP80116-643Q | |
| IC402 | 8-759-990-41 | IC BU5725F | |
| IC403 | 8-759-804-72 | IC LB1631M | |
| IC404 | 8-759-107-68 | IC CX20115A | |
| IC405 | 8-759-990-55 | IC CXA8006M | |
| IC406 | 8-759-805-06 | IC CXA1127M | |
| IC501 | 8-759-013-24 | IC LM358ML | |
| IC502 | 8-759-945-17 | IC MB3775PF | |

### COIL

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| L301 | 1-407-169-XX | INDUCTOR 100UH | |
| L302 | 1-408-987-21 | INDUCTOR 330UH | |
| L401 | 1-408-978-21 | INDUCTOR 47UH | |
| L402 | 1-408-978-21 | INDUCTOR 47UH | |
| L501 | 1-424-104-11 | COIL, CHOKE 10UH | |
| L502 | 1-424-106-11 | COIL, CHOKE 47UH | |
| L503 | 1-424-106-11 | COIL, CHOKE 47UH | |

### TRANSISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| Q301 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q302 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q303 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q304 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q305 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q306 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q308 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q403 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q404 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q407 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q417 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q418 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q501 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q502 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q503 | 8-729-805-25 | TRANSISTOR 2SB1121 | |
| Q504 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q505 | 8-729-805-25 | TRANSISTOR 2SB1121 | |
| Q506 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q507 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q508 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q509 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q510 | 8-729-100-66 | TRANSISTOR 2SC1623 | |

### RESISTOR

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R301 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R302 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R303 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R304 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R305 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R306 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R307 | 1-216-031-00 | METAL GLAZE | 180 | 5% | 1/10W | |
| R308 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R309 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R310 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R311 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R312 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R313 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R314 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R315 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R316 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R317 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R318 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R319 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R320 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R321 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R322 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R323 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R325 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R326 | 1-216-021-00 | METAL GLAZE | 68 | 5% | 1/10W | |
| R327 | 1-216-029-00 | METAL GLAZE | 150 | 5% | 1/10W | |
| R328 | 1-216-093-00 | METAL GLAZE | 68K | 5% | 1/10W | |
| R329 | 1-216-119-00 | METAL GLAZE | 820K | 5% | 1/10W | |
| R330 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R331 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R332 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R335 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R336 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R339 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R341 | 1-216-115-00 | METAL GLAZE | 560K | 5% | 1/10W | |
| R342 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R343 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R350 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R351 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R352 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R355 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R356 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R357 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R358 | 1-216-001-00 | METAL GLAZE | 10 | 5% | 1/10W | |
| R359 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R360 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R361 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R367 | 1-216-101-00 | METAL GLAZE | 150K | 5% | 1/10W | |
| R368 | 1-216-013-00 | METAL GLAZE | 33 | 5% | 1/10W | |
| R401 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R402 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R403 | 1-216-172-00 | METAL GLAZE | 82 | 5% | 1/8W | |
| R404 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R405 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R406 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R407 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R408 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R409 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R410 | 1-216-099-00 | METAL GLAZE | 120K | 5% | 1/10W | |
| R411 | 1-216-099-00 | METAL GLAZE | 120K | 5% | 1/10W | |
| R412 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R414 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R415 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R416 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R417 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R418 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R419 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R420 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R421 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R423 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R424 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R425 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R426 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R428 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R429 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R430 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R442 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R443 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R444 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R447 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R448 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R449 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R450 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R452 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R454 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R456 | 1-216-093-00 | METAL GLAZE | 68K | 5% | 1/10W | |
| R457 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R458 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R462 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R466 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R468 | 1-217-671-11 | METAL GLAZE | 1 | 5% | 1/10W | |
| R469 | 1-216-304-11 | METAL GLAZE | 3.3 | 5% | 1/10W | |
| R470 | 1-216-304-11 | METAL GLAZE | 3.3 | 5% | 1/10W | |
| R471 | 1-216-304-11 | METAL GLAZE | 3.3 | 5% | 1/10W | |
| R472 | 1-217-671-11 | METAL GLAZE | 1 | 5% | 1/10W | |
| R473 | 1-217-671-11 | METAL GLAZE | 1 | 5% | 1/10W | |
| R474 | 1-217-671-11 | METAL GLAZE | 1 | 5% | 1/10W | |
| R475 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R476 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R477 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R478 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R479 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R480 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R482 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R483 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R484 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R485 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R486 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R489 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R490 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R491 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R492 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R493 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R494 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R497 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R498 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R499 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R501 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R502 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R503 | 1-216-101-00 | METAL GLAZE | 150K | 5% | 1/10W | |
| R504 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R505 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R506 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R507 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R508 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R510 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R511 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R512 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R513 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R514 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R515 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R516 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R517 | 1-216-067-00 | METAL GLAZE | 5.6K | 5% | 1/10W | |
| R518 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R519 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R520 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R521 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R522 | 1-216-067-00 | METAL GLAZE | 5.6K | 5% | 1/10W | |
| R523 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R524 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R525 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R527 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R531 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R532 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |

VARIABLE RESISTOR

| | | |
|---|---|---|
| RV401 | 1-230-499-11 | RES, ADJ, CARBON 100K |
| RV501 | 1-228-993-00 | RES, ADJ, CARBON 4.7K |

THERMISTOR

| | | |
|---|---|---|
| TH401 | 1-800-200-00 | THERMISTOR |

When indicating parts by reference number, please include the board name.

### CRYSTAL

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| X301 | 1-567-699-11 | VIBRATOR, CRYSTAL (5.85MHz) | |
| X401 | 1-577-116-11 | VIBRATOR, CRYSTAL (16MHz) | |

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### *A-7061-808-A RP-74 (A) BOARD, COMPLETE

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### CAPACITOR

| Ref.No | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C001 | 1-126-157-11 | ELECT | 10MF | 20% | 16V |
| C002 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C003 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C004 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C005 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C006 | 1-163-121-00 | CERAMIC CHIP | 150PF | 5% | 50V |
| C007 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C008 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C009 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |
| C010 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C011 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |
| C021 | 1-162-587-11 | CERAMIC CHIP | 0.039MF | 10% | 25V |
| C101 | 1-135-148-21 | TANTAL. CHIP | 1.5MF | 20% | 10V |
| C102 | 1-135-148-21 | TANTAL. CHIP | 1.5MF | 20% | 10V |
| C103 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C104 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C105 | 1-135-161-21 | TANTAL. CHIP | 22MF | 20% | 6.3V |
| C106 | 1-164-222-11 | CERAMIC CHIP | 0.22MF | | 25V |
| C107 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C108 | 1-135-161-21 | TANTAL. CHIP | 22MF | 20% | 6.3V |
| C109 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C110 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C111 | 1-163-033-00 | CERAMIC CHIP | 0.022MF | | 50V |
| C112 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C113 | 1-163-090-00 | CERAMIC CHIP | 7PF | 0.25PF | 50V |
| C114 | 1-164-330-21 | CERAMIC CHIP | 0.22MF | 10% | 16V |
| C115 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C116 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C117 | 1-163-033-00 | CERAMIC CHIP | 0.022MF | | 50V |
| C118 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C119 | 1-163-090-00 | CERAMIC CHIP | 7PF | 0.25PF | 50V |
| C120 | 1-164-330-21 | CERAMIC CHIP | 0.22MF | 10% | 16V |
| C121 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C122 | 1-163-088-00 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C123 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C124 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C125 | 1-124-638-11 | ELECT | 22MF | 20% | 6.3V |
| C126 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C127 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C128 | 1-124-438-00 | ELECT | 1MF | 20% | 50V |
| C129 | 1-124-638-11 | ELECT | 22MF | 20% | 6.3V |
| C130 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C131 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C132 | 1-124-438-00 | ELECT | 1MF | 20% | 50V |
| C133 | 1-163-088-00 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C134 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C139 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C140 | 1-126-157-11 | ELECT | 10MF | 20% | 16V |
| C141 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C142 | 1-163-129-00 | CERAMIC CHIP | 330PF | 5% | 50V |
| C143 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C144 | 1-126-157-11 | ELECT | 10MF | 20% | 16V |
| C145 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C146 | 1-163-129-00 | CERAMIC CHIP | 330PF | 5% | 50V |
| C147 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C148 | 1-164-222-11 | CERAMIC CHIP | 0.22MF | | 25V |
| C149 | 1-163-092-00 | CERAMIC CHIP | 9PF | 0.25PF | 50V |
| C150 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C151 | 1-163-090-00 | CERAMIC CHIP | 7PF | 0.25PF | 50V |
| C153 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |
| C154 | 1-163-075-00 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C160 | 1-126-157-11 | ELECT | 10MF | 20% | 16V |
| C201 | 1-135-148-21 | TANTAL. CHIP | 1.5MF | 20% | 10V |
| C202 | 1-135-148-21 | TANTAL. CHIP | 1.5MF | 20% | 10V |
| C203 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C204 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C205 | 1-135-161-21 | TANTAL. CHIP | 22MF | 20% | 6.3V |
| C206 | 1-164-222-11 | CERAMIC CHIP | 0.22MF | | 25V |
| C207 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C208 | 1-135-161-21 | TANTAL. CHIP | 22MF | 20% | 6.3V |
| C209 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C210 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C211 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C212 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C213 | 1-163-090-00 | CERAMIC CHIP | 7PF | 0.25PF | 50V |
| C214 | 1-164-330-21 | CERAMIC CHIP | 0.22MF | 10% | 16V |
| C215 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C216 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C217 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C218 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C219 | 1-163-090-00 | CERAMIC CHIP | 7PF | 0.25PF | 50V |
| C220 | 1-164-330-21 | CERAMIC CHIP | 0.22MF | 10% | 16V |
| C221 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C222 | 1-163-088-00 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C223 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C224 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C225 | 1-124-638-11 | ELECT | 22MF | 20% | 6.3V |
| C226 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C227 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C228 | 1-124-438-00 | ELECT | 1MF | 20% | 50V |
| C229 | 1-124-638-11 | ELECT | 22MF | 20% | 6.3V |
| C230 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C231 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C232 | 1-124-438-00 | ELECT | 1MF | 20% | 50V |
| C233 | 1-163-088-00 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C239 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| C240 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C241 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C242 | 1-164-232-11 | CERAMIC CHIP 0.01MF | 50V |
| C243 | 1-126-157-11 | ELECT 10MF 20% | 16V |
| C244 | 1-164-232-11 | CERAMIC CHIP 0.01MF | 50V |
| C245 | 1-163-129-00 | CERAMIC CHIP 330PF 5% | 50V |
| C246 | 1-163-241-11 | CERAMIC CHIP 39PF 5% | 50V |
| C247 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C248 | 1-163-090-00 | CERAMIC CHIP 7PF 0.25PF | 50V |
| C249 | 1-163-129-00 | CERAMIC CHIP 330PF 5% | 50V |
| C250 | 1-163-105-00 | CERAMIC CHIP 33PF 5% | 50V |
| C251 | 1-164-222-11 | CERAMIC CHIP 0.22MF | 25V |
| C252 | 1-163-092-00 | CERAMIC CHIP 9PF 0.25PF | 50V |
| C253 | 1-163-009-11 | CERAMIC CHIP 0.001MF 10% | 50V |
| C254 | 1-163-075-00 | CERAMIC CHIP 0.047MF 10% | 25V |
| C260 | 1-126-157-11 | ELECT 10MF 20% | 16V |
| | | CONNECTOR | |
| CN001 | 1-565-073-11 | SOCKET, CONNECTOR 16P | |
| CN002 | 1-575-364-11 | CONNECTOR, FPC/FFC 14P | |
| CN003 | 1-506-475-11 | PIN, CONNECTOR 10P | |
| CN004 | 1-506-468-11 | PIN, CONNECTOR 3P | |
| CN005 | 1-506-486-11 | PIN, CONNECTOR 7P | |
| | | DIODE | |
| D001 | 8-719-400-18 | DIODE MA152WK | |
| D002 | 8-719-400-18 | DIODE MA152WK | |
| D102 | 8-719-400-18 | DIODE MA152WK | |
| D103 | 8-719-400-18 | DIODE MA152WK | |
| D202 | 8-719-400-18 | DIODE MA152WK | |
| D203 | 8-719-400-18 | DIODE MA152WK | |
| | | IC | |
| IC001 | 8-752-003-44 | IC CX20034 | |
| IC002 | 8-752-003-44 | IC CX20034 | |
| | | COIL | |
| L001 | 1-410-387-11 | INDUCTOR CHIP 33UH | |
| L002 | 1-408-948-00 | INDUCTOR 220UH | |
| L003 | 1-408-970-21 | INDUCTOR 10UH | |
| L101 | 1-410-656-11 | INDUCTOR CHIP 150UH | |
| L102 | 1-410-385-11 | INDUCTOR CHIP 22UH | |
| L103 | 1-408-973-21 | INDUCTOR 18UH | |
| L104 | 1-408-973-21 | INDUCTOR 18UH | |
| L105 | 1-408-970-21 | INDUCTOR 10UH | |
| L106 | 1-408-974-21 | INDUCTOR 22UH | |
| L109 | 1-410-393-11 | INDUCTOR CHIP 100UH | |
| L201 | 1-410-656-11 | INDUCTOR CHIP 150UH | |
| L202 | 1-410-385-11 | INDUCTOR CHIP 22UH | |
| L203 | 1-408-972-21 | INDUCTOR 15UH | |
| L204 | 1-408-972-21 | INDUCTOR 15UH | |
| L205 | 1-408-970-21 | INDUCTOR 10UH | |

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| L206 | 1-408-974-21 | INDUCTOR 22UH | |
| L209 | 1-410-393-11 | INDUCTOR CHIP 100UH | |
| | | TRANSISTOR | |
| Q001 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q002 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q003 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q004 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q005 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q006 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q007 | 8-729-119-76 | TRANSISTOR 2SA1175TP-HFE | |
| Q008 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q009 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q010 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q011 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q012 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q013 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q014 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q015 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q101 | 8-729-202-38 | TRANSISTOR 2SC3326N | |
| Q102 | 8-729-202-38 | TRANSISTOR 2SC3326N | |
| Q103 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q106 | 8-729-102-06 | TRANSISTOR 2SC2223 | |
| Q107 | 8-729-102-06 | TRANSISTOR 2SC2223 | |
| Q201 | 8-729-202-38 | TRANSISTOR 2SC3326N | |
| Q202 | 8-729-202-38 | TRANSISTOR 2SC3326N | |
| Q203 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q204 | 8-729-102-06 | TRANSISTOR 2SC2223 | |
| Q205 | 8-729-102-06 | TRANSISTOR 2SC2223 | |
| | | RESISTOR | |
| R001 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R002 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R003 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W | |
| R004 | 1-216-061-00 | METAL GLAZE 3.3K 5% 1/10W | |
| R005 | 1-216-061-00 | METAL GLAZE 3.3K 5% 1/10W | |
| R006 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| R007 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R008 | 1-216-039-00 | METAL GLAZE 390 5% 1/10W | |
| R009 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R010 | 1-216-013-00 | METAL GLAZE 33 5% 1/10W | |
| R011 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R012 | 1-216-043-00 | METAL GLAZE 560 5% 1/10W | |
| R013 | 1-216-037-00 | METAL GLAZE 330 5% 1/10W | |
| R014 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R015 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| R016 | 1-216-085-00 | METAL GLAZE 33K 5% 1/10W | |
| R017 | 1-216-061-00 | METAL GLAZE 3.3K 5% 1/10W | |
| R022 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R023 | 1-216-072-00 | METAL GLAZE 9.1K 5% 1/10W | |
| R024 | 1-216-069-00 | METAL GLAZE 6.8K 5% 1/10W | |
| R025 | 1-216-086-00 | METAL GLAZE 36K 5% 1/10W | |
| R026 | 1-216-063-00 | METAL GLAZE 3.9K 5% 1/10W | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R030 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R031 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R033 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R034 | 1-216-021-00 | METAL GLAZE | 68 | 5% | 1/10W | |
| R035 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R036 | 1-216-048-00 | METAL GLAZE | 910 | 5% | 1/10W | |
| R101 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R102 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R103 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R104 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R105 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R106 | 1-216-091-00 | METAL GLAZE | 56K | 5% | 1/10W | |
| R107 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R108 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R109 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R110 | 1-216-086-00 | METAL GLAZE | 36K | 5% | 1/10W | |
| R111 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R112 | 1-216-748-11 | METAL GLAZE | 39K | 5% | 1/10W | |
| R113 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R114 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R115 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R116 | 1-216-086-00 | METAL GLAZE | 36K | 5% | 1/10W | |
| R117 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R118 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R119 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R120 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R121 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R122 | 1-216-682-11 | METAL CHIP | 20K | 0.50% | 1/10W | |
| R123 | 1-216-683-11 | METAL CHIP | 22K | 0.50% | 1/10W | |
| R134 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R135 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R136 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R137 | 1-216-001-00 | METAL GLAZE | 10 | 5% | 1/10W | |
| R138 | 1-216-031-00 | METAL GLAZE | 180 | 5% | 1/10W | |
| R139 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R140 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R141 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R142 | 1-216-001-00 | METAL GLAZE | 10 | 5% | 1/10W | |
| R143 | 1-216-031-00 | METAL GLAZE | 180 | 5% | 1/10W | |
| R150 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R201 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R202 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R203 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R204 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R205 | 1-216-748-11 | METAL GLAZE | 39K | 5% | 1/10W | |
| R206 | 1-216-091-00 | METAL GLAZE | 56K | 5% | 1/10W | |
| R207 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R208 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R209 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R210 | 1-216-086-00 | METAL GLAZE | 36K | 5% | 1/10W | |
| R211 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R212 | 1-216-748-11 | METAL GLAZE | 39K | 5% | 1/10W | |
| R213 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R214 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R215 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R216 | 1-216-086-00 | METAL GLAZE | 36K | 5% | 1/10W | |
| R217 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R218 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R219 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R220 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R221 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R232 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R233 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R234 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R235 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R236 | 1-216-031-00 | METAL GLAZE | 180 | 5% | 1/10W | |
| R237 | 1-216-001-00 | METAL GLAZE | 10 | 5% | 1/10W | |
| R238 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R239 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R240 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R241 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R242 | 1-216-001-00 | METAL GLAZE | 10 | 5% | 1/10W | |
| R243 | 1-216-031-00 | METAL GLAZE | 180 | 5% | 1/10W | |

VARIABLE RESISTOR

| | | | |
|---|---|---|---|
| RV101 | 1-230-719-11 | RES, ADJ, CARBON | 2.2K |
| RV102 | 1-230-719-11 | RES, ADJ, CARBON | 2.2K |
| RV201 | 1-230-719-11 | RES, ADJ, CARBON | 2.2K |
| RV202 | 1-230-719-11 | RES, ADJ, CARBON | 2.2K |

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*A-7061-810-A VI-65 (A) BOARD, COMPLETE
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CAPACITOR

| | | | | | |
|---|---|---|---|---|---|
| C001 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C002 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C003 | 1-163-011-11 | CERAMIC CHIP | 0.0015MF | 10% | 50V |
| C004 | 1-163-127-00 | CERAMIC CHIP | 270PF | 5% | 50V |
| C005 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C006 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C008 | 1-163-241-11 | CERAMIC CHIP | 39PF | 5% | 50V |
| C009 | 1-163-115-00 | CERAMIC CHIP | 82PF | 5% | 50V |
| C010 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C011 | 1-163-113-00 | CERAMIC CHIP | 68PF | 5% | 50V |
| C012 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C014 | 1-124-463-00 | ELECT | 0.1MF | 20% | 50V |
| C015 | 1-124-904-71 | ELECT | 2.2MF | 20% | 50V |
| C016 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C017 | 1-163-090-00 | CERAMIC CHIP | 7PF | 0.25PF | 50V |
| C018 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C019 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C020 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C021 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C023 | 1-163-103-00 | CERAMIC CHIP | 27PF | 5% | 50V |
| C024 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C025 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C026 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C027 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C028 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C029 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C030 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C031 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C032 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C033 | 1-163-089-00 | CERAMIC CHIP | 6PF | 0.5PF | 50V |
| C034 | 1-163-101-00 | CERAMIC CHIP | 22PF | 5% | 50V |
| C035 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C036 | 1-163-090-00 | CERAMIC CHIP | 7PF | 0.25PF | 50V |
| C037 | 1-163-099-00 | CERAMIC CHIP | 18PF | 5% | 50V |
| C038 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C039 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C040 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C041 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C042 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C043 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C044 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C045 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C046 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C047 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C048 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C051 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C052 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C053 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C054 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C055 | 1-163-101-00 | CERAMIC CHIP | 22PF | 5% | 50V |
| C056 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C057 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C058 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C059 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C060 | 1-163-103-00 | CERAMIC CHIP | 27PF | 5% | 50V |
| C061 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C062 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C063 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C064 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C065 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C100 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C101 | 1-163-131-00 | CERAMIC CHIP | 390PF | 5% | 50V |
| C104 | 1-163-129-00 | CERAMIC CHIP | 330PF | 5% | 50V |
| C108 | 1-163-128-00 | CERAMIC CHIP | 300PF | 5% | 50V |
| C109 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C110 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C111 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C112 | 1-163-241-11 | CERAMIC CHIP | 39PF | 5% | 50V |
| C113 | 1-163-111-00 | CERAMIC CHIP | 56PF | 5% | 50V |
| C114 | 1-163-135-00 | CERAMIC CHIP | 560PF | 5% | 50V |
| C118 | 1-163-091-00 | CERAMIC CHIP | 8PF | 0.25PF | 50V |
| C120 | 1-124-896-71 | ELECT | 33MF | 20% | 16V |
| C122 | 1-163-099-00 | CERAMIC CHIP | 18PF | 5% | 50V |
| C124 | 1-163-134-00 | CERAMIC CHIP | 510PF | 5% | 50V |
| C125 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C126 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C127 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C128 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C129 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C130 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C131 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C132 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C133 | 1-124-464-11 | ELECT | 0.22MF | 20% | 50V |
| C134 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C135 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C136 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C137 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C138 | 1-163-105-00 | CERAMIC CHIP | 33PF | 5% | 50V |
| C139 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C140 | 1-163-113-00 | CERAMIC CHIP | 68PF | 5% | 50V |
| C141 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C142 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C143 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C144 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C145 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C146 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C147 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C148 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C149 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C150 | 1-163-133-00 | CERAMIC CHIP | 470PF | 5% | 50V |
| C151 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C160 | 1-163-123-00 | CERAMIC CHIP | 180PF | 5% | 50V |
| C161 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W |
| C162 | 1-163-119-00 | CERAMIC CHIP | 120PF | 5% | 50V |
| C163 | 1-163-096-00 | CERAMIC CHIP | 13PF | 5% | 50V |
| C164 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C165 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C166 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C167 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C168 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C169 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C170 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C171 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C200 | 1-163-128-00 | CERAMIC CHIP | 300PF | 5% | 50V |
| C201 | 1-163-131-00 | CERAMIC CHIP | 390PF | 5% | 50V |
| C202 | 1-163-128-00 | CERAMIC CHIP | 300PF | 5% | 50V |
| C203 | 1-163-088-00 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C204 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C205 | 1-124-904-71 | ELECT | 2.2MF | 20% | 50V |
| C206 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C207 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C208 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C209 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C210 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C211 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W |
| C212 | 1-163-099-00 | CERAMIC CHIP | 18PF | 5% | 50V |
| C213 | 1-163-133-00 | CERAMIC CHIP | 470PF | 5% | 50V |

When indicating parts by reference number, please include the board name.

# VI-65

| Ref.No | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C214 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C215 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C216 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C217 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |
| C218 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C301 | 1-163-119-00 | CERAMIC CHIP | 120PF | 5% | 50V |
| C302 | 1-163-121-00 | CERAMIC CHIP | 150PF | 5% | 50V |
| C303 | 1-163-113-00 | CERAMIC CHIP | 68PF | 5% | 50V |
| C306 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C307 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C308 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C309 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C310 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C313 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C314 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C315 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C316 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C317 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C318 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C319 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C320 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C321 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C322 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C323 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C324 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C325 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C326 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C327 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C328 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C331 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C332 | 1-163-101-00 | CERAMIC CHIP | 22PF | 5% | 50V |
| C333 | 1-163-106-00 | CERAMIC CHIP | 36PF | 5% | 50V |
| C334 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C335 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C336 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C341 | 1-163-104-00 | CERAMIC CHIP | 30PF | 5% | 50V |
| C343 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C344 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C345 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C346 | 1-163-241-11 | CERAMIC CHIP | 39PF | 5% | 50V |
| C347 | 1-163-099-00 | CERAMIC CHIP | 18PF | 5% | 50V |
| C348 | 1-163-089-00 | CERAMIC CHIP | 6PF | 0.5PF | 50V |
| C349 | 1-163-089-00 | CERAMIC CHIP | 6PF | 0.5PF | 50V |
| C400 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |
| C401 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |
| C402 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C403 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C404 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C405 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C407 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |
| C408 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |
| C409 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C410 | 1-163-101-00 | CERAMIC CHIP | 22PF | 5% | 50V |
| C411 | 1-163-111-00 | CERAMIC CHIP | 56PF | 5% | 50V |
| C412 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C413 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C414 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C415 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C416 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C417 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C418 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C419 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |
| C420 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C421 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C422 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W |
| C423 | 1-163-111-00 | CERAMIC CHIP | 56PF | 5% | 50V |
| C424 | 1-163-101-00 | CERAMIC CHIP | 22PF | 5% | 50V |
| C425 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C426 | 1-163-121-00 | CERAMIC CHIP | 150PF | 5% | 50V |
| C427 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C428 | 1-163-111-00 | CERAMIC CHIP | 56PF | 5% | 50V |
| C429 | 1-163-133-00 | CERAMIC CHIP | 470PF | 5% | 50V |
| C430 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C431 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C432 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C500 | 1-163-096-00 | CERAMIC CHIP | 13PF | 5% | 50V |
| C501 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C502 | 1-163-113-00 | CERAMIC CHIP | 68PF | 5% | 50V |
| C504 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C506 | 1-163-115-00 | CERAMIC CHIP | 82PF | 5% | 50V |
| C507 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C508 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C509 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C510 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C512 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C513 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C514 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C515 | 1-163-115-00 | CERAMIC CHIP | 82PF | 5% | 50V |
| C516 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C517 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C519 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C521 | 1-163-119-00 | CERAMIC CHIP | 120PF | 5% | 50V |
| C522 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C523 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C524 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C525 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C526 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C527 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C528 | 1-163-115-00 | CERAMIC CHIP | 82PF | 5% | 50V |
| C529 | 1-163-115-00 | CERAMIC CHIP | 82PF | 5% | 50V |
| C530 | 1-163-111-00 | CERAMIC CHIP | 56PF | 5% | 50V |
| C531 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C532 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C533 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C534 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C535 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | | Remark |
|---|---|---|---|---|
| C536 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C537 | 1-163-005-11 | CERAMIC CHIP 470PF | 10% | 50V |
| C538 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C539 | 1-163-119-00 | CERAMIC CHIP 120PF | 5% | 50V |
| C540 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C541 | 1-163-261-00 | CERAMIC CHIP 270PF | 5% | 50V |
| C601 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C602 | 1-163-241-11 | CERAMIC CHIP 39PF | 5% | 50V |
| C604 | 1-163-099-00 | CERAMIC CHIP 18PF | 5% | 50V |
| C605 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C606 | 1-163-126-00 | CERAMIC CHIP 240PF | 5% | 50V |
| C607 | 1-163-141-00 | CERAMIC CHIP 0.001MF | 5% | 50V |
| C608 | 1-163-141-00 | CERAMIC CHIP 0.001MF | 5% | 50V |
| C609 | 1-123-875-11 | ELECT 10MF | 20% | 50V |
| C610 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C611 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C620 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C621 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C622 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C623 | 1-163-100-00 | CERAMIC CHIP 20PF | 5% | 50V |
| C700 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C701 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C702 | 1-163-118-00 | CERAMIC CHIP 110PF | 5% | 50V |
| C703 | 1-123-875-11 | ELECT 10MF | 20% | 50V |
| C704 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C705 | 1-163-141-00 | CERAMIC CHIP 0.001MF | 5% | 50V |
| C706 | 1-163-007-11 | CERAMIC CHIP 680PF | 10% | 50V |
| C708 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C709 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C710 | 1-163-088-00 | CERAMIC CHIP 5PF | 0.25PF | 50V |
| C711 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C712 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C713 | 1-123-382-00 | ELECT 3.3MF | 20% | 50V |
| C714 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C715 | 1-124-925-11 | ELECT 2.2MF | 20% | 50V |
| C716 | 1-163-019-00 | CERAMIC CHIP 0.0068MF | 10% | 50V |
| C717 | 1-163-241-11 | CERAMIC CHIP 39PF | 5% | 50V |
| C720 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C722 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C730 | 1-163-126-00 | CERAMIC CHIP 240PF | 5% | 50V |
| C731 | 1-163-124-00 | CERAMIC CHIP 200PF | 5% | 50V |
| C800 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C801 | 1-163-119-00 | CERAMIC CHIP 120PF | 5% | 50V |
| C802 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C803 | 1-163-111-00 | CERAMIC CHIP 56PF | 5% | 50V |
| C804 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V |
| C805 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C806 | 1-163-109-00 | CERAMIC CHIP 47PF | 5% | 50V |
| C807 | 1-164-182-11 | CERAMIC CHIP 0.0033MF | 10% | 50V |
| C808 | 1-216-295-00 | METAL GLAZE 0 | 5% | 1/10W |
| C809 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C810 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C811 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |

| Ref.No | Part No. | Description | | Remark |
|---|---|---|---|---|
| C812 | 1-163-129-00 | CERAMIC CHIP 330PF | 5% | 50V |
| C813 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C814 | 1-123-875-11 | ELECT 10MF | 20% | 50V |
| C815 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C816 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C817 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C818 | 1-163-129-00 | CERAMIC CHIP 330PF | 5% | 50V |
| C819 | 1-163-129-00 | CERAMIC CHIP 330PF | 5% | 50V |
| C820 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C821 | 1-124-925-11 | ELECT 2.2MF | 20% | 50V |
| C822 | 1-124-925-11 | ELECT 2.2MF | 20% | 50V |
| C823 | 1-163-036-00 | CERAMIC CHIP 0.068MF | | 50V |
| C824 | 1-124-925-11 | ELECT 2.2MF | 20% | 50V |
| C825 | 1-124-464-11 | ELECT 0.22MF | 20% | 50V |
| C826 | 1-163-033-00 | CERAMIC CHIP 0.022MF | | 50V |
| C827 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C828 | 1-163-129-00 | CERAMIC CHIP 330PF | 5% | 50V |
| C829 | 1-124-463-00 | ELECT 0.1MF | 20% | 50V |
| C830 | 1-163-088-00 | CERAMIC CHIP 5PF | 0.25PF | 50V |
| C831 | 1-124-252-00 | ELECT 0.33MF | 20% | 50V |
| C832 | 1-163-097-00 | CERAMIC CHIP 15PF | 5% | 50V |
| C833 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C834 | 1-163-108-00 | CERAMIC CHIP 43PF | 5% | 50V |
| C836 | 1-163-129-00 | CERAMIC CHIP 330PF | 5% | 50V |
| C837 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C838 | 1-163-033-00 | CERAMIC CHIP 0.022MF | | 50V |
| C839 | 1-124-927-11 | ELECT 4.7MF | 20% | 50V |
| C840 | 1-131-358-00 | TANTALUM 6.8MF | 10% | 25V |
| C841 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C842 | 1-216-059-00 | METAL GLAZE 2.7K | 5% | 1/10W |
| C843 | 1-123-875-11 | ELECT 10MF | 20% | 50V |
| C844 | 1-163-121-00 | CERAMIC CHIP 150PF | 5% | 50V |
| C846 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C847 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C848 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C849 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C851 | 1-163-011-11 | CERAMIC CHIP 0.0015MF | 10% | 50V |
| C852 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C853 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C854 | 1-163-105-00 | CERAMIC CHIP 33PF | 5% | 50V |
| C855 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C856 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C857 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C858 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C859 | 1-123-875-11 | ELECT 10MF | 20% | 50V |
| C860 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C863 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C866 | 1-163-109-00 | CERAMIC CHIP 47PF | 5% | 50V |
| C867 | 1-163-099-00 | CERAMIC CHIP 18PF | 5% | 50V |
| C868 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C869 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C870 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C871 | 1-163-036-00 | CERAMIC CHIP 0.068MF | | 50V |

When indicating parts by reference number, please include the board name.

# VI-65

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| C901 | 1-126-233-11 | ELECT 22MF 20% | 25V |
| C902 | 1-163-105-00 | CERAMIC CHIP 33PF 5% | 50V |
| C903 | 1-163-109-00 | CERAMIC CHIP 47PF 5% | 50V |
| C904 | 1-163-103-00 | CERAMIC CHIP 27PF 5% | 50V |
| C905 | 1-124-925-11 | ELECT 2.2MF 20% | 50V |

## CONNECTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| CN001 | 1-568-082-11 | CONNECTOR (RECEPTALE) 26P | |
| CN002 | 1-568-080-11 | CONNECTOR (RECEPTALE) 22P | |
| CN003 | 1-506-475-11 | PIN, CONNECTOR 10P | |

## TRIMMER

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| CV800 | 1-141-227-00 | CAP, CERAMIC TRIMMER | |

## DIODE

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| D001 | 8-719-400-18 | DIODE MA152WK | |
| D002 | 8-719-800-76 | DIODE 1SS226 | |
| D003 | 8-719-400-18 | DIODE MA152WK | |
| D004 | 8-719-400-18 | DIODE MA152WK | |
| D005 | 8-719-400-18 | DIODE MA152WK | |
| D006 | 8-719-400-18 | DIODE MA152WK | |
| D007 | 8-719-800-76 | DIODE 1SS226 | |
| D008 | 8-719-400-18 | DIODE MA152WK | |
| D009 | 8-719-400-18 | DIODE MA152WK | |
| D100 | 8-719-104-34 | DIODE 1S2836 | |
| D101 | 8-719-400-18 | DIODE MA152WK | |
| D102 | 8-719-400-18 | DIODE MA152WK | |
| D200 | 8-719-400-18 | DIODE MA152WK | |
| D201 | 8-719-400-18 | DIODE MA152WK | |
| D202 | 8-719-400-18 | DIODE MA152WK | |
| D203 | 8-719-400-18 | DIODE MA152WK | |
| D300 | 8-719-400-18 | DIODE MA152WK | |
| D301 | 8-719-400-18 | DIODE MA152WK | |
| D302 | 8-719-400-18 | DIODE MA152WK | |
| D303 | 8-719-400-18 | DIODE MA152WK | |
| D400 | 8-719-800-76 | DIODE 1SS226 | |
| D401 | 8-719-400-18 | DIODE MA152WK | |
| D402 | 8-719-400-18 | DIODE MA152WK | |
| D404 | 8-719-400-18 | DIODE MA152WK | |
| D500 | 8-719-800-76 | DIODE 1SS226 | |
| D501 | 8-719-400-18 | DIODE MA152WK | |
| D502 | 8-719-800-76 | DIODE 1SS226 | |
| D503 | 8-719-800-76 | DIODE 1SS226 | |
| D504 | 8-719-400-18 | DIODE MA152WK | |
| D700 | 8-719-400-18 | DIODE MA152WK | |
| D701 | 8-719-400-18 | DIODE MA152WK | |
| D702 | 8-719-800-76 | DIODE 1SS226 | |
| D703 | 8-719-800-76 | DIODE 1SS226 | |
| D704 | 8-719-400-18 | DIODE MA152WK | |
| D800 | 8-719-800-76 | DIODE 1SS226 | |

## DELAY LINE

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| DL400 | 1-415-517-31 | DELAY LINE, DUAL 1H-2H | |
| DL400 | 1-415-518-31 | DELAY LINE, DUAL 1H-2H | |

## FILTER

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| FL001 | 1-409-397-11 | TRAP | |
| FL100 | 1-236-540-11 | LPF (DEMOD OUT) | |
| FL101 | 1-236-539-11 | LPF (REC Y) | |
| FL700 | 1-235-633-11 | BPF | |
| FL701 | 1-235-632-11 | BPF | |
| FL800 | 1-409-396-11 | REC C TRAP | |
| FL801 | 1-236-538-11 | BPF | |
| FL802 | 1-409-394-11 | TRAP, CHROMA EMPHASIS | |

## IC

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| IC001 | 8-759-209-17 | IC TA8607F | |
| IC002 | 8-759-925-60 | IC BA401 | |
| IC003 | 8-759-927-52 | IC BA7036LS | |
| IC100 | 8-752-003-00 | IC CX20030 | |
| IC101 | 8-759-710-09 | IC NJM2233AM | |
| IC200 | 8-752-031-01 | IC CXA1047M | |
| IC301 | 8-759-012-00 | IC MC10H116M | |
| IC302 | 8-759-009-06 | IC MC14052BF | |
| IC400 | 8-752-003-12 | IC CX20031 | |
| IC500 | 8-759-925-60 | IC BA401 | |
| IC700 | 8-759-202-67 | IC CX20117 | |
| IC800 | 8-752-924-94 | IC CX22021 | |
| IC801 | 8-752-003-22 | IC CX20032 | |
| IC802 | 8-759-914-56 | IC CX23054 | |
| IC900 | 8-749-920-43 | IC SI-3050CA | |

## COIL

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| L001 | 1-410-072-21 | INDUCTOR 820UH | |
| L002 | 1-408-985-21 | INDUCTOR 180UH | |
| L003 | 1-408-968-21 | INDUCTOR 6.8UH | |
| L004 | 1-408-963-11 | INDUCTOR 2.7UH | |
| L005 | 1-408-968-21 | INDUCTOR 6.8UH | |
| L006 | 1-408-969-21 | INDUCTOR 8.2UH | |
| L008 | 1-408-973-21 | INDUCTOR 18UH | |
| L009 | 1-408-989-21 | INDUCTOR 470UH | |
| L010 | 1-408-989-21 | INDUCTOR 470UH | |
| L011 | 1-408-970-21 | INDUCTOR 10UH | |
| L012 | 1-408-972-21 | INDUCTOR 15UH | |
| L013 | 1-408-973-21 | INDUCTOR 18UH | |
| L014 | 1-408-976-21 | INDUCTOR 33UH | |
| L015 | 1-408-970-21 | INDUCTOR 10UH | |
| L016 | 1-408-970-21 | INDUCTOR 10UH | |
| L017 | 1-408-974-21 | INDUCTOR 22UH | |
| L100 | 1-408-966-21 | INDUCTOR 4.7UH | |
| L102 | 1-408-967-21 | INDUCTOR 5.6UH | |
| L104 | 1-408-975-21 | INDUCTOR 27UH | |
| L105 | 1-408-984-21 | INDUCTOR 150UH | |
| L106 | 1-408-964-21 | INDUCTOR 3.3UH | |
| L107 | 1-408-983-21 | INDUCTOR 120UH | |
| L109 | 1-408-970-21 | INDUCTOR 10UH | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| L110 | 1-408-970-21 | INDUCTOR 10UH | |
| L120 | 1-408-977-21 | INDUCTOR 39UH | |
| L122 | 1-407-169-XX | INDUCTOR 100UH | |
| L201 | 1-407-169-XX | INDUCTOR 100UH | |
| L301 | 1-408-984-21 | INDUCTOR 150UH | |
| L302 | 1-408-987-21 | INDUCTOR 330UH | |
| L305 | 1-408-969-21 | INDUCTOR 8.2UH | |
| L310 | 1-408-948-00 | INDUCTOR 220UH | |
| L311 | 1-408-970-21 | INDUCTOR 10UH | |
| L312 | 1-408-970-21 | INDUCTOR 10UH | |
| L400 | 1-408-987-21 | INDUCTOR 330UH | |
| L401 | 1-408-970-21 | INDUCTOR 10UH | |
| L402 | 1-408-969-21 | INDUCTOR 8.2UH | |
| L403 | 1-408-958-21 | INDUCTOR 1UH | |
| L404 | 1-408-958-21 | INDUCTOR 1UH | |
| L405 | 1-408-974-21 | INDUCTOR 22UH | |
| L407 | 1-408-974-21 | INDUCTOR 22UH | |
| L501 | 1-408-976-21 | INDUCTOR 33UH | |
| L503 | 1-408-976-21 | INDUCTOR 33UH | |
| L504 | 1-408-976-21 | INDUCTOR 33UH | |
| L505 | 1-408-977-21 | INDUCTOR 39UH | |
| L506 | 1-408-974-21 | INDUCTOR 22UH | |
| L601 | 1-408-976-21 | INDUCTOR 33UH | |
| L603 | 1-408-976-21 | INDUCTOR 33UH | |
| L700 | 1-408-974-21 | INDUCTOR 22UH | |
| L701 | 1-408-980-21 | INDUCTOR 68UH | |
| L800 | 1-407-169-XX | INDUCTOR 100UH | |
| L801 | 1-408-983-21 | INDUCTOR 120UH | |
| L802 | 1-408-985-21 | INDUCTOR 180UH | |
| L803 | 1-408-974-21 | INDUCTOR 22UH | |
| L804 | 1-408-948-00 | INDUCTOR 220UH | |
| L807 | 1-408-973-21 | INDUCTOR 18UH | |
| L901 | 1-408-976-21 | INDUCTOR 33UH | |

VARIABLE COIL

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| LV400 | 1-408-512-00 | COIL (VARIABLE) | |

TRANSISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| Q001 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q002 | 8-729-620-06 | TRANSISTOR 2SC3052EF | |
| Q003 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q004 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q005 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q006 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q007 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q008 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q009 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q011 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q012 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q014 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q015 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q016 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q017 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q018 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q019 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q020 | 8-729-202-38 | TRANSISTOR 2SC3326N | |
| Q021 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q022 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q023 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q024 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q025 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q026 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q027 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q029 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q030 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q031 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q032 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q033 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q034 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q035 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q036 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q038 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q039 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q040 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q100 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q101 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q102 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q103 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q104 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q106 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q107 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q108 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q109 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q110 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q111 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q112 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q113 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q114 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q116 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q117 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q118 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q119 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q120 | 8-729-113-31 | TRANSISTOR 2SB733-2 | |
| Q121 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q122 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q123 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q124 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q125 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q126 | 8-729-102-07 | TRANSISTOR 2SC2223-F13 | |
| Q127 | 8-729-102-07 | TRANSISTOR 2SC2223-F13 | |
| Q128 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q129 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q130 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q131 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q132 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q133 | 8-729-216-22 | TRANSISTOR 2SA1162 | |

When indicating parts by reference number, please include the board name.

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| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| Q134 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q135 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q136 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q140 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q200 | 8-729-202-38 | TRANSISTOR 2SC3326N | |
| Q201 | 8-729-202-38 | TRANSISTOR 2SC3326N | |
| Q202 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q203 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q204 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q205 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q206 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q207 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q208 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q209 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q210 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q211 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q212 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q213 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q214 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q215 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q220 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q221 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q222 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q224 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q225 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q226 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q227 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q301 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q302 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q303 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q313 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q314 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q315 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q316 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q317 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q318 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q319 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q321 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q322 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q323 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q324 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q325 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q326 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q327 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q328 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q329 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q330 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q331 | 8-729-102-07 | TRANSISTOR 2SC2223-F13 | |
| Q332 | 8-729-102-07 | TRANSISTOR 2SC2223-F13 | |
| Q333 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q334 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q335 | 8-729-102-07 | TRANSISTOR 2SC2223-F13 | |
| Q336 | 8-729-102-07 | TRANSISTOR 2SC2223-F13 | |
| Q337 | 8-729-102-07 | TRANSISTOR 2SC2223-F13 | |
| Q338 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q339 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q400 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q401 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q402 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q404 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q405 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q406 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q407 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q416 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q417 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q418 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q419 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q500 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q501 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q502 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q503 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q504 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q505 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q506 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q507 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q508 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q509 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q510 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q511 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q512 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q513 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q514 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q515 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q518 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q519 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q520 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q521 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q522 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q523 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q524 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q525 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q526 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q527 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q528 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q529 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q530 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q531 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q532 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q533 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q534 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q535 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q536 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q537 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q538 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q539 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q601 | 8-729-100-66 | TRANSISTOR 2SC1623 | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| Q602 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q603 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q604 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q605 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q607 | 8-729-907-46 | TRANSISTOR IMZ1 | |
| Q608 | 8-729-903-10 | TRANSISTOR FMW1 | |
| Q609 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q610 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q611 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q612 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q613 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q614 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q700 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q701 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q702 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q704 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q705 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q706 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q800 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q801 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q802 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q803 | 8-729-202-38 | TRANSISTOR 2SC3326N | |
| Q804 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q805 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q806 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q807 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q808 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q809 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q810 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q811 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q812 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q813 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q815 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q816 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q817 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q818 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q901 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q902 | 8-729-216-22 | TRANSISTOR 2SA1162 | |

RESISTOR

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R001 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R002 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R003 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R004 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R005 | 1-216-039-00 | METAL GLAZE | 390 | 5% | 1/10W | |
| R006 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R007 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R008 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R009 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R010 | 1-216-029-00 | METAL GLAZE | 150 | 5% | 1/10W | |
| R011 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R012 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R013 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R014 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R015 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R016 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R017 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R018 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R020 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R021 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R024 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R025 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R026 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R027 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R028 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R029 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R030 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R031 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R032 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R040 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R041 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R042 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R043 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R044 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R045 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R046 | 1-216-748-11 | METAL GLAZE | 39K | 5% | 1/10W | |
| R048 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R049 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R050 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R051 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R052 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R053 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R054 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R055 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R056 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R058 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R059 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R060 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R061 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R062 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R063 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R064 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R065 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R066 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R067 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R068 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R069 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R070 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R074 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R075 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R076 | 1-216-029-00 | METAL GLAZE | 150 | 5% | 1/10W | |
| R077 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R078 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R079 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R080 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R081 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |

When indicating parts by reference number, please include the board name.

# VI-65

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R082 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R083 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R084 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R085 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R086 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R087 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R088 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R089 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R090 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R091 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R092 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R093 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R094 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R095 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R096 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R097 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R098 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R100 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R101 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R102 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R103 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R104 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R105 | 1-216-032-00 | METAL GLAZE | 200 | 5% | 1/10W | |
| R106 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R107 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R108 | 1-216-031-00 | METAL GLAZE | 180 | 5% | 1/10W | |
| R109 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R111 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R112 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R114 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R115 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R116 | 1-218-140-11 | METAL GLAZE | 390 | 1% | 1/10W | |
| R117 | 1-218-150-11 | METAL GLAZE | 1.2K | 1% | 1/10W | |
| R118 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R119 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R120 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R122 | 1-216-019-00 | METAL GLAZE | 56 | 5% | 1/10W | |
| R123 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R124 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R125 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R126 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R127 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R129 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R130 | 1-216-017-00 | METAL GLAZE | 47 | 5% | 1/10W | |
| R131 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R132 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R133 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R135 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R136 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R137 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R138 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R139 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R140 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R141 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R142 | 1-216-101-00 | METAL GLAZE | 150K | 5% | 1/10W | |
| R143 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R144 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R145 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R146 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R148 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R150 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R151 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R152 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R153 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R154 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R155 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R156 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R157 | 1-216-091-00 | METAL GLAZE | 56K | 5% | 1/10W | |
| R158 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R159 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R160 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R161 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R162 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R163 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R164 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R165 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R166 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R167 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R168 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R169 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R170 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R171 | 1-216-038-00 | METAL GLAZE | 360 | 5% | 1/10W | |
| R172 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R173 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R174 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R175 | 1-218-132-11 | METAL GLAZE | 4.7K | 1% | 1/10W | |
| R176 | 1-216-093-00 | METAL GLAZE | 68K | 5% | 1/10W | |
| R177 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R178 | 1-216-109-00 | METAL GLAZE | 330K | 5% | 1/10W | |
| R179 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R180 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R181 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R182 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R183 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R184 | 1-216-099-00 | METAL GLAZE | 120K | 5% | 1/10W | |
| R185 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R186 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R187 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R188 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R189 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R190 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R191 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R193 | 1-216-091-00 | METAL GLAZE | 56K | 5% | 1/10W | |
| R194 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R195 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R196 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R197 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R198 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R200 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R201 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R202 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R203 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R204 | 1-218-142-11 | METAL GLAZE | 470 | 1% | 1/10W | |
| R205 | 1-218-140-11 | METAL GLAZE | 390 | 1% | 1/10W | |
| R206 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R207 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R208 | 1-218-150-11 | METAL GLAZE | 1.2K | 1% | 1/10W | |
| R209 | 1-216-061-00 | METAL GLAZE | 3.3K | 1% | 1/10W | |
| R210 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R211 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R212 | 1-218-132-11 | METAL GLAZE | 4.7K | 1% | 1/10W | |
| R213 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R214 | 1-216-328-11 | METAL GLAZE | 4.3K | 1% | 1/10W | |
| R215 | 1-218-155-11 | METAL GLAZE | 3.9K | 1% | 1/10W | |
| R216 | 1-218-155-11 | METAL GLAZE | 3.9K | 1% | 1/10W | |
| R217 | 1-216-748-11 | METAL GLAZE | 39K | 5% | 1/10W | |
| R218 | 1-216-103-00 | METAL GLAZE | 180K | 5% | 1/10W | |
| R223 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R224 | 1-216-061-00 | METAL GLAZE | 3.3K | 1% | 1/10W | |
| R225 | 1-218-132-11 | METAL GLAZE | 4.7K | 1% | 1/10W | |
| R226 | 1-218-152-11 | METAL GLAZE | 1.5K | 1% | 1/10W | |
| R227 | 1-216-748-11 | METAL GLAZE | 39K | 5% | 1/10W | |
| R228 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R229 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R230 | 1-216-748-11 | METAL GLAZE | 39K | 5% | 1/10W | |
| R231 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R232 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R233 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R235 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R236 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R237 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R238 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R239 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R240 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R241 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R242 | 1-216-111-00 | METAL GLAZE | 390K | 5% | 1/10W | |
| R243 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R244 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R245 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R246 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R247 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R248 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R249 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R250 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R251 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R252 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R253 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R262 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R265 | 1-216-084-00 | METAL GLAZE | 30K | 5% | 1/10W | |

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R266 | 1-216-068-00 | METAL GLAZE | 6.2K | 5% | 1/10W | |
| R268 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R269 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R271 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R272 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R273 | 1-218-140-11 | METAL GLAZE | 390 | 1% | 1/10W | |
| R301 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R302 | 1-216-076-00 | METAL GLAZE | 13K | 5% | 1/10W | |
| R303 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R304 | 1-216-076-00 | METAL GLAZE | 13K | 5% | 1/10W | |
| R305 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R306 | 1-216-076-00 | METAL GLAZE | 13K | 5% | 1/10W | |
| R307 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R308 | 1-216-076-00 | METAL GLAZE | 13K | 5% | 1/10W | |
| R310 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R311 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R314 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R315 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R316 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R330 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R331 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R332 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R333 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R334 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R335 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R336 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R337 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R338 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R339 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R342 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R343 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R344 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R345 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R346 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R347 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R348 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R349 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R350 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R351 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R352 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R353 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R354 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R355 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R356 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R359 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R360 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R361 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R362 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R363 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R364 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R365 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R366 | 1-216-050-00 | METAL GLAZE | 1.1K | 5% | 1/10W | |
| R368 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |

When indicating parts by reference number, please include the board name.

# VI-65

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R369 | 1-216-042-00 | METAL GLAZE | 510 | 5% | 1/10W | |
| R370 | 1-216-056-00 | METAL GLAZE | 2K | 5% | 1/10W | |
| R371 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R372 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R373 | 1-216-039-00 | METAL GLAZE | 390 | 5% | 1/10W | |
| R374 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R375 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R376 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R377 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R379 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R380 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R383 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R384 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R385 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R386 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R387 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R388 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R389 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R390 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R391 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R392 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R393 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R394 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R395 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R397 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R400 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R401 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R402 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R403 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R404 | 1-216-013-00 | METAL GLAZE | 33 | 5% | 1/10W | |
| R405 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R406 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R407 | 1-216-111-00 | METAL GLAZE | 390K | 5% | 1/10W | |
| R408 | 1-216-093-00 | METAL GLAZE | 68K | 5% | 1/10W | |
| R409 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R410 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R411 | 1-216-027-00 | METAL GLAZE | 120 | 5% | 1/10W | |
| R414 | 1-216-039-00 | METAL GLAZE | 390 | 5% | 1/10W | |
| R415 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R416 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R417 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R418 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R419 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R422 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R423 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R425 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R426 | 1-216-009-00 | METAL GLAZE | 22 | 5% | 1/10W | |
| R427 | 1-216-027-00 | METAL GLAZE | 120 | 5% | 1/10W | |
| R428 | 1-216-076-00 | METAL GLAZE | 13K | 5% | 1/10W | |
| R429 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R430 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R431 | 1-216-117-00 | METAL GLAZE | 680K | 5% | 1/10W | |
| R432 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R433 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R434 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R435 | 1-216-039-00 | METAL GLAZE | 390 | 5% | 1/10W | |
| R436 | 1-216-748-11 | METAL GLAZE | 39K | 5% | 1/10W | |
| R437 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R438 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R439 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R440 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R441 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R442 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R443 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R444 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R445 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R446 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R447 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R460 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R461 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R462 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R463 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R466 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R477 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R478 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R479 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R501 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R502 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R503 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R504 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R505 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R506 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R507 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R508 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R510 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R511 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R512 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R513 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R514 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R515 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R516 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R517 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R518 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R519 | 1-216-027-00 | METAL GLAZE | 120 | 5% | 1/10W | |
| R520 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R521 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R522 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R523 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R524 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R525 | 1-216-031-00 | METAL GLAZE | 180 | 5% | 1/10W | |
| R526 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R527 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R528 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R529 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R530 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R533 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R534 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R535 | 1-216-031-00 | METAL GLAZE | 180 | 5% | 1/10W | |
| R536 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R537 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R538 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R539 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R540 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R541 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R542 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R543 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R544 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R545 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R548 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R549 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R550 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R551 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R552 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R554 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R555 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R556 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R557 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R559 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R560 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R561 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R562 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R563 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R564 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R565 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R567 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R568 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R569 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R570 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R571 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R572 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R573 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R574 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R575 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R576 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R577 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R578 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R579 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R580 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R581 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R582 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R583 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R584 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R585 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R586 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R587 | 1-216-039-00 | METAL GLAZE | 390 | 5% | 1/10W | |
| R589 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R590 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R591 | 1-216-031-00 | METAL GLAZE | 180 | 5% | 1/10W | |
| R592 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R593 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R594 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R595 | 1-216-092-00 | METAL GLAZE | 62K | 5% | 1/10W | |
| R596 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R597 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R598 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R599 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R601 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R602 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R603 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R604 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R605 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R606 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R607 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R608 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R609 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R610 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R611 | 1-216-067-00 | METAL GLAZE | 5.6K | 5% | 1/10W | |
| R612 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R613 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R614 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R615 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R616 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R617 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R618 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R619 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R620 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R623 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R625 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R626 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R650 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R651 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R652 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R655 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R656 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R657 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R658 | 1-216-039-00 | METAL GLAZE | 390 | 5% | 1/10W | |
| R659 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R660 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R661 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R662 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R663 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R664 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R700 | 1-216-093-00 | METAL GLAZE | 68K | 5% | 1/10W | |
| R701 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R702 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R703 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R704 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R705 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R706 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R707 | 1-216-093-00 | METAL GLAZE | 68K | 5% | 1/10W | |
| R708 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R709 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |

When indicating parts by reference number, please include the board name.

# VI-65

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R710 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R711 | 1-216-095-00 | METAL GLAZE | 82K | 5% | 1/10W | |
| R712 | 1-216-099-00 | METAL GLAZE | 120K | 5% | 1/10W | |
| R713 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R714 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R715 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R716 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R717 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R718 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R719 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R720 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R721 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R722 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R723 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R724 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R725 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R726 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R730 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R731 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R732 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R733 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R734 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R735 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R740 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R741 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R742 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R743 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R744 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R800 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R801 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R802 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R803 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R804 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R805 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R806 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R807 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R808 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R809 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R812 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R813 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R814 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R815 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R817 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R818 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R819 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R820 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R821 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R822 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R823 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R824 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R826 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R827 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R830 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R831 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R832 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R833 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R835 | 1-216-103-00 | METAL GLAZE | 180K | 5% | 1/10W | |
| R836 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R840 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R841 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R843 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R844 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R845 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R846 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R848 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R849 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R850 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R851 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R852 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R853 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R854 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R855 | 1-216-039-00 | METAL GLAZE | 390 | 5% | 1/10W | |
| R856 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W | |
| R857 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R858 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R859 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R861 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R863 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R864 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R866 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R867 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R868 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R870 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R872 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R873 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R874 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R875 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R876 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R877 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R878 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R879 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R880 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R881 | 1-216-748-11 | METAL GLAZE | 39K | 5% | 1/10W | |
| R883 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R884 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R885 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R886 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R887 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R888 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R889 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R890 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R892 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R894 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R895 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R896 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R897 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| R901 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| R902 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| R903 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R904 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R905 | 1-216-056-00 | METAL GLAZE 2K 5% 1/10W | |
| R906 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R907 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R908 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R910 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R912 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R913 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |

### VARIABLE RESISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| RV101 | 1-228-998-00 | RES, ADJ, CARBON 220K | |
| RV102 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV103 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV104 | 1-228-993-00 | RES, ADJ, CARBON 4.7K | |
| RV105 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV202 | 1-228-991-00 | RES, ADJ, CARBON 2.2K | |
| RV203 | 1-228-993-00 | RES, ADJ, CARBON 4.7K | |
| RV204 | 1-228-996-00 | RES, ADJ, CARBON 47K | |
| RV205 | 1-228-991-00 | RES, ADJ, CARBON 2.2K | |
| RV300 | 1-228-990-00 | RES, ADJ, CARBON 1K | |
| RV301 | 1-228-990-00 | RES, ADJ, CARBON 1K | |
| RV302 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV303 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV304 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV305 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV400 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV401 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV601 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV700 | 1-228-996-00 | RES, ADJ, CARBON 47K | |
| RV701 | 1-228-998-00 | RES, ADJ, CARBON 220K | |
| RV800 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV801 | 1-228-995-00 | RES, ADJ, CARBON 22K | |

### CRYSTAL

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| X400 | 1-567-442-11 | VIBRATOR, CRYSTAL (13.3MHz) | |
| X800 | 1-567-504-11 | OSCILLATOR, CRYSTAL (4.43MHz) | |

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| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| | *A-7061-811-A | FL-24 BOARD, COMPLETE (AEP MODEL)<br>************************ | |
| | *A-7062-055-A | FL-24 (C) BOARD, COMPLETE (UK MODEL)<br>************************** | |
| | *3-697-607-01 | HOLDER (SU), LED | |
| | *3-742-524-01 | HOLDER (LEFT), INDICATION TUBE | |
| | *3-742-548-01 | HOLDER (RIGHT), INDICATION TUBE | |

### CAPACITOR

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| C001 | 1-126-154-11 | ELECT | 47MF | 20% | 6.3V | |
| C002 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V | |
| C003 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V | |
| C004 | 1-126-153-11 | ELECT | 22MF | 20% | 6.3V | |
| C005 | 1-126-153-11 | ELECT | 22MF | 20% | 6.3V | |
| C006 | 1-126-157-11 | ELECT | 10MF | 20% | 10V | |
| C007 | 1-126-157-11 | ELECT | 10MF | 20% | 10V | |
| C008 | 1-126-157-11 | ELECT | 10MF | 20% | 10V | |
| C009 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V | |
| C010 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V | |
| C011 | 1-126-157-11 | ELECT | 10MF | 20% | 10V | |
| C012 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V | |
| C013 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V | |
| C014 | 1-126-157-11 | ELECT | 10MF | 20% | 10V | |
| C015 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C016 | 1-163-089-00 | CERAMIC CHIP | 6PF | 0.5PF | 50V | |
| C017 | 1-163-111-00 | CERAMIC CHIP | 56PF | 5% | 50V | |
| C018 | 1-163-098-00 | CERAMIC CHIP | 16PF | 5% | 50V | |
| C019 | 1-163-098-00 | CERAMIC CHIP | 16PF | 5% | 50V | |
| C020 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C021 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V | |
| C023 | 1-163-989-11 | CERAMIC CHIP | 0.033MF | 10% | 25V | |
| C024 | 1-163-989-11 | CERAMIC CHIP | 0.033MF | 10% | 25V | |

### FILTER

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| CF001 | 1-567-132-00 | VIBLATOR, CERAMIC | |

### CONNECTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| CN001 | 1-575-365-11 | CONNECTOR, FPC/FFC 18P | |
| CN002 | 1-575-365-11 | CONNECTOR, FPC/FFC 18P | |
| CN003 | 1-575-363-11 | CONNECTOR, FPC/FFC 12P | |
| CN004 | 1-575-365-11 | CONNECTOR, FPC/FFC 18P | |
| CN004 | 1-575-386-11 | CABLE, FLAT (1.0MM PITCH) 18P | |

### TRIMMER

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| CT001 | 1-141-311-11 | CAP, VAR, TRIMMER (CHIP) | |

### DIODE

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| D001 | 8-719-920-05 | DIODE SLP281C-50 | |
| D002 | 8-719-920-05 | DIODE SLP281C-50 | |
| D003 | 8-719-400-18 | DIODE MA152WK | |
| D004 | 8-719-955-04 | DIODE PY5504S-1 | |
| D005 | 8-719-955-04 | DIODE PY5504S-1 | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| D006 | 8-719-400-18 | DIODE MA152WK | |
| D007 | 8-719-918-96 | DIODE AA3422S | |
| D008 | 8-719-400-18 | DIODE MA152WK | |
| D009 | 8-719-920-05 | DIODE SLP281C-50 | |
| D010 | 8-719-921-01 | DIODE EBR5534S (UK MODEL) | |

IC

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| IC001 | 8-759-942-05 | IC BA6800AFVC | |
| IC002 | 1-466-131-11 | CATCHER RAY BLOCK (GP1U52X) | |
| IC003 | 8-759-937-56 | IC S-8054ALB-LM-S | |
| IC004 | 8-759-941-78 | IC S-8053ALB | |
| IC005 | 8-759-989-50 | IC MB89793B-GDX401 | |
| IC006 | 8-759-748-54 | IC CAT35C202P | |

COIL

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| L001 | 1-407-169-XX | INDUCTOR 100UH | |
| L002 | 1-407-169-XX | INDUCTOR 100UH | |
| L003 | 1-407-169-XX | INDUCTOR 100UH | |

INDICATOR TUBE

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| ND001 | 1-519-507-31 | INDICATOR TUBE, FLUORESCENT | |

TRANSISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| Q001 | 8-729-901-47 | TRANSISTOR DTA143EK | |
| Q002 | 8-729-901-47 | TRANSISTOR DTA143EK | |
| Q003 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q004 | 8-729-216-22 | TRANSISTOR 2SA1162 (UK MODEL) | |

RESISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| R001 | 1-216-053-00 | METAL GLAZE 1.5K 5% 1/10W | |
| R002 | 1-216-053-00 | METAL GLAZE 1.5K 5% 1/10W | |
| R003 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R004 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R005 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R006 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R007 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R008 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R009 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R010 | 1-216-031-00 | METAL GLAZE 180 5% 1/10W | |
| R011 | 1-216-031-00 | METAL GLAZE 180 5% 1/10W | |
| R012 | 1-216-115-00 | METAL GLAZE 560K 5% 1/10W | |
| R013 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R014 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R015 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R016 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R017 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R018 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R019 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R020 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R021 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R022 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R024 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W (UK MODEL) | |
| R025 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R026 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R027 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R028 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R029 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R030 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R031 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R032 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R033 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R034 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R035 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R036 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R037 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R038 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R039 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R040 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R041 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R042 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R043 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R044 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R045 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R046 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| R047 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R048 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R049 | 1-216-113-00 | METAL GLAZE 470K 5% 1/10W | |
| R050 | 1-216-113-00 | METAL GLAZE 470K 5% 1/10W | |
| R051 | 1-216-059-00 | METAL GLAZE 2.7K 5% 1/10W | |
| R052 | 1-216-059-00 | METAL GLAZE 2.7K 5% 1/10W | |
| R053 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R054 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R055 | 1-216-031-00 | METAL GLAZE 180 5% 1/10W (UK MODEL) | |
| R056 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W (UK MODEL) | |
| R058 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W (AEP MODEL) | |

SWITCH

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| S001 | 1-554-174-00 | SWITCH, KEY BOARD (ON/STANDBY) | |
| S002 | 1-554-174-00 | SWITCH, KEY BOARD (EJECT) | |
| S003 | 1-554-174-00 | SWITCH, KEY BOARD (Hi 8) | |
| S004 | 1-554-174-00 | SWITCH, KEY BOARD (RESET) | |

CRYSTAL

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| X001 | 1-567-098-00 | VIBRATOR, CRYSTAL (32.768kHz) | |

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| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| | *A-7061-812-A | FR-41 (A) BOARD, COMPLETE<br>************************* | |
| | *3-689-521-01 | HOLDER, LED, ROUND | |
| | *3-697-607-01 | HOLDER (SU), LED | |
| | 3-731-123-01 | BASE, VOLUME | |
| | 7-627-552-38 | SCREW, PRECISION +P 1.7X3 | |

CAPACITOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| C101 | 1-163-038-00 | CERAMIC CHIP 0.1MF 25V | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| C102 | 1-163-109-00 | CERAMIC CHIP 47PF 5% | 50V |
| C103 | 1-163-109-00 | CERAMIC CHIP 47PF 5% | 50V |
| C104 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C105 | 1-135-156-21 | TANTAL. CHIP 6.8MF 20% | 6.3V |
| C106 | 1-135-156-21 | TANTAL. CHIP 6.8MF 20% | 6.3V |
| C118 | 1-163-109-00 | CERAMIC CHIP 47PF 5% | 50V |
| C119 | 1-163-109-00 | CERAMIC CHIP 47PF 5% | 50V |

### CONNECTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| CN104 | 1-575-360-11 | CONNECTOR, FPC/FFC 5P | |
| CN105 | 1-575-362-11 | CONNECTOR, FPC/FFC 11P | |
| CN105 | 1-575-385-11 | CABLE, FLAT (1.0MM PITCH) 11P | |
| CN106 | 1-575-365-11 | CONNECTOR, FPC/FFC 18P | |

### DIODE

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| D110 | 8-719-106-45 | DIODE RD9.1M-B3 | |
| D111 | 8-719-400-18 | DIODE MA152WK | |
| D112 | 8-719-400-18 | DIODE MA152WK | |
| D113 | 8-719-301-49 | DIODE SEL2810A | |
| D114 | 8-719-301-49 | DIODE SEL2810A | |
| D115 | 8-719-920-05 | DIODE SLP281C-50 | |
| D116 | 8-719-920-05 | DIODE SLP281C-50 | |
| D117 | 8-719-812-32 | DIODE TLY123 | |
| D118 | 8-719-920-05 | DIODE SLP281C-50 | |
| D119 | 8-719-920-05 | DIODE SLP281C-50 | |
| D120 | 8-719-812-31 | DIODE TLR123 | |
| D121 | 8-719-301-49 | DIODE SEL2810A | |

### IC

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| IC101 | 8-759-111-56 | IC UPC4572G2 | |
| IC102 | 8-759-982-04 | IC RC5532M | |

### JACK

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| J102 | 1-566-850-31 | CONNECTOR, (S) TERMINAL 4P (LINE IN 2-S VIDEO) | |

### JUMPER RESISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| JR110 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR111 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR112 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR113 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR114 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR115 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR116 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR117 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR118 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR119 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR120 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR121 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR122 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR123 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR124 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR125 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR126 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR127 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR128 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR129 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR130 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR131 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR132 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR133 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR134 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR135 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR136 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR137 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR138 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR139 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR140 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR141 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR142 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR143 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR144 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR145 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR146 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR147 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR148 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR149 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR150 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR151 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR152 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR153 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR154 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR155 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR156 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR157 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR158 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR159 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR160 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR161 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |

### TRANSISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| Q101 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q102 | 8-729-901-01 | TRANSISTOR DTC144EK | |

### RESISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| R101 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R102 | 1-216-061-00 | METAL GLAZE 3.3K 5% 1/10W | |
| R103 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R104 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R105 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R106 | 1-216-061-00 | METAL GLAZE 3.3K 5% 1/10W | |
| R107 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R108 | 1-216-037-00 | METAL GLAZE 330 5% 1/10W | |
| R109 | 1-216-037-00 | METAL GLAZE 330 5% 1/10W | |
| R110 | 1-216-037-00 | METAL GLAZE 330 5% 1/10W | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R111 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R112 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R113 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R114 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R115 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R116 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R117 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R118 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R119 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R120 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R121 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R122 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R123 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R125 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R127 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R128 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R129 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R130 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R131 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R132 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R133 | 1-216-021-00 | METAL GLAZE | 68 | 5% | 1/10W | |
| R134 | 1-216-021-00 | METAL GLAZE | 68 | 5% | 1/10W | |
| R144 | 1-216-022-00 | METAL GLAZE | 75 | 5% | 1/10W | |
| R145 | 1-216-022-00 | METAL GLAZE | 75 | 5% | 1/10W | |
| R146 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R148 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R149 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| | | SWITCH | | | | |
| S101 | 1-554-174-00 | SWITCH, KEY BOARD (INPUT SELECT) | | | | |
| S102 | 1-554-174-00 | SWITCH, KEY BOARD (REC MODE LP/SP) | | | | |
| S103 | 1-554-174-00 | SWITCH, KEY BOARD (COUNTER RESET) | | | | |
| S105 | 1-554-174-00 | SWITCH, KEY BOARD (ANT TV/VTR) | | | | |
| S106 | 1-554-174-00 | SWITCH, KEY BOARD (AUTO EDIT) | | | | |
| S107 | 1-570-854-11 | SWITCH, SLIDE (AUDIO MONITOR) | | | | |
| S108 | 1-554-174-00 | SWITCH, KEY BOARD (RECORDER) | | | | |
| S109 | 1-554-174-00 | SWITCH, KEY BOARD (PLAYER) | | | | |
| S110 | 1-554-174-00 | SWITCH, KEY BOARD (EDIT MONITOR) | | | | |
| S111 | 1-554-174-00 | SWITCH, KEY BOARD (SYNCRO EDIT) | | | | |
| | | VARIABLE RESISTOR | | | | |
| VR101 | 1-237-877-11 | RES, VAR, SLIDE 10K/10K (REC LEVEL) | | | | |
| VR102 | 1-238-374-11 | RES, VAR, CARBON 10K/10K (PHONE LEVEL) | | | | |

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*A-7061-813-A MC-37 BOARD, COMPLETE
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| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| | | CAPACITOR | | | | |
| C601 | 1-124-225-00 | ELECT | 100MF | 20% | 6.3V | |
| C602 | 1-124-225-00 | ELECT | 100MF | 20% | 6.3V | |
| C603 | 1-163-123-00 | CERAMIC CHIP | 180PF | 5% | 50V | |
| C604 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V | |
| C605 | 1-126-160-11 | ELECT | 1MF | 20% | 50V | |
| C606 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V | |
| C607 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V | |
| C608 | 1-124-225-00 | ELECT | 100MF | 20% | 6.3V | |
| C609 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V | |
| C610 | 1-163-019-00 | CERAMIC CHIP | 0.0068MF | 10% | 50V | |
| C611 | 1-163-019-00 | CERAMIC CHIP | 0.0068MF | 10% | 50V | |
| C612 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V | |
| C613 | 1-163-123-00 | CERAMIC CHIP | 180PF | 5% | 50V | |
| C614 | 1-126-153-11 | ELECT | 22MF | 20% | 6.3V | |
| C615 | 1-126-153-11 | ELECT | 22MF | 20% | 6.3V | |
| C616 | 1-126-157-11 | ELECT | 10MF | 20% | 16V | |
| C617 | 1-126-157-11 | ELECT | 10MF | 20% | 16V | |
| C618 | 1-126-160-11 | ELECT | 1MF | 20% | 50V | |
| C619 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V | |
| C620 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V | |
| C621 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V | |
| C622 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V | |
| | | CONNECTOR | | | | |
| CN601 | 1-575-367-11 | CONNECTOR, FPC/FFC 11P | | | | |
| | | DIODE | | | | |
| D603 | 8-719-106-45 | DIODE RD9.1M-B3 | | | | |
| D604 | 8-719-106-45 | DIODE RD9.1M-B3 | | | | |
| D607 | 8-719-106-45 | DIODE RD9.1M-B3 | | | | |
| | | IC | | | | |
| IC601 | 8-759-111-56 | IC UPC4572G2 | | | | |
| | | JACK | | | | |
| J601 | 1-565-276-31 | JACK, ULTRA SMALL 1P (LINCS) | | | | |
| J602 | 1-563-282-11 | JACK, SMALL TYPE (MIC) | | | | |
| J603 | 1-562-917-11 | JACK (SMALL TYPE) (HEADPHONES) | | | | |
| | | TRANSISTOR | | | | |
| Q602 | 8-729-100-66 | TRANSISTOR 2SC1623 | | | | |
| Q603 | 8-729-100-66 | TRANSISTOR 2SC1623 | | | | |
| Q604 | 8-729-100-66 | TRANSISTOR 2SC1623 | | | | |
| | | RESISTOR | | | | |
| R601 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R602 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R603 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R604 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W | |
| R605 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R608 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R609 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R610 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R611 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R612 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R613 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| R614 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R615 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R616 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R617 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |

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| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| | *A-7061-814-A | TU-100 BOARD, COMPLETE<br>*********************** | (AEP MODEL) |
| | *A-7061-897-A | TU-100 (C) BOARD, COMPLETE<br>************************** | (UK MODEL) |
| | | CAPACITOR | |
| C001 | 1-126-233-11 | ELECT 22MF 20% 25V | |
| C002 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | |
| C003 | 1-126-233-11 | ELECT 22MF 20% 25V | |
| C004 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | |
| C005 | 1-124-360-00 | ELECT 1000MF 20% 16V | |
| C006 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | |
| C007 | 1-124-927-11 | ELECT 4.7MF 20% 50V | |
| C011 | 1-126-233-11 | ELECT 22MF 20% 25V | |
| C012 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | |
| C013 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | |
| C014 | 1-123-875-11 | ELECT 10MF 20% 50V | |
| C015 | 1-163-101-00 | CERAMIC CHIP 220PF 5% 50V | (UK MODEL) |
| C015 | 1-163-103-00 | CERAMIC CHIP 27PF 5% 50V | (AEP MODEL) |
| C016 | 1-163-097-00 | CERAMIC CHIP 15PF 5% 50V | (UK MODEL) |
| C016 | 1-163-123-00 | CERAMIC CHIP 180PF 5% 50V | (AEP MODEL) |
| C017 | 1-163-111-00 | CERAMIC CHIP 56PF 5% 50V | (AEP MODEL) |
| C017 | 1-163-119-00 | CERAMIC CHIP 120PF 5% 50V | (UK MODEL) |
| C019 | 1-164-161-11 | CERAMIC CHIP 0.0022MF 10% 50V | |
| C020 | 1-163-017-00 | CERAMIC CHIP 0.0047MF 10% 50V | |
| C021 | 1-163-009-11 | CERAMIC CHIP 0.001MF 10% 50V | |
| C022 | 1-163-037-11 | CERAMIC CHIP 0.022MF 10% 25V | |
| C023 | 1-124-925-11 | ELECT 2.2MF 20% 50V | |
| C029 | 1-126-233-11 | ELECT 22MF 20% 25V | |
| C030 | 1-126-233-11 | ELECT 22MF 20% 25V | |
| C032 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | |
| C033 | 1-126-233-11 | ELECT 22MF 20% 25V | |
| C035 | 1-126-233-11 | ELECT 22MF 20% 25V | (UK MODEL) |
| C042 | 1-136-161-00 | MYLAR 0.047MF 10% 50V | |
| C043 | 1-123-875-11 | ELECT 10MF 20% 50V | (UK MODEL) |
| | | CONNECTOR | |
| CN001 | 1-563-605-11 | CONNECTOR, FLEXIBLE 28P | |
| CN001 | 1-575-454-11 | WIRE, FLAT TYPE (28 CORE) | |
| | | DIODE | |
| D002 | 8-719-400-18 | DIODE MA152WK | |
| D003 | 8-719-200-36 | DIODE E10QS04 | |
| | | IC | |
| IC001 | 8-759-157-40 | IC UPC574J | |

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| | | IF BLOCK | |
| IF001⚠ | 1-466-166-11 | IF BLOCK (IFX-395C) | (UK MODEL) |
| IF001⚠ | 1-466-167-11 | IF BLOCK (IFX-389C) | (AEP MODEL) |
| | | JUMPER RESISTOR | |
| JR001 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR002 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR003 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR004 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR005 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR006 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR008 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR011 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR012 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR013 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR014 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR015 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR016 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR017 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR018 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR019 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR020 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR021 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR023 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR025 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR027 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR032 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR033 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR034 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR035 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR036 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR038 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR039 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR040 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| | | COIL | |
| L001 | 1-408-413-00 | INDUCTOR 22UH | |
| L002 | 1-408-411-00 | INDUCTOR 15UH | (AEP MODEL) |
| L002 | 1-408-419-00 | INDUCTOR 68UH | (UK MODEL) |
| L003 | 1-408-408-00 | INDUCTOR 8.2UH | |
| L004 | 1-408-408-00 | INDUCTOR 8.2UH | |
| L005 | 1-408-408-00 | INDUCTOR 8.2UH | |
| L007 | 1-408-408-00 | INDUCTOR 8.2UH | |
| L009 | 1-408-413-00 | INDUCTOR 22UH | |
| | | DECORDER BLOCK | |
| MP001⚠ | 1-466-144-11 | DECORDER BLOCK (MPL-389) | (AEP MODEL) |
| | | TRANSISTOR | |
| Q001 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q003 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q004 | 8-729-100-66 | TRANSISTOR 2SC1623 | |

When indicating parts by reference number, please include the board name.

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

# TU-100 PS-196

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| Q006 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q007 | 8-729-900-53 | TRANSISTOR DTC114EK | (UK MODEL) |
| Q008 | 8-729-100-66 | TRANSISTOR 2SC1623 | (UK MODEL) |
| Q010 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q014 | 8-729-216-22 | TRANSISTOR 2SA1162 | (AEP MODEL) |

### RESISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| R001 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R002 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R003 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R004 | 1-216-212-00 | METAL GLAZE 3.9K 5% 1/8W | |
| R005 | 1-216-210-00 | METAL GLAZE 3.3K 5% 1/8W | |
| R008 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R009 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | (UK MODEL) |
| R009 | 1-216-070-00 | METAL GLAZE 7.5K 5% 1/10W | (AEP MODEL) |
| R010 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W | (UK MODEL) |
| R010 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | (AEP MODEL) |
| R011 | 1-216-037-00 | METAL GLAZE 330 5% 1/10W | |
| R012 | 1-216-039-00 | METAL GLAZE 390 5% 1/10W | |
| R013 | 1-216-053-00 | METAL GLAZE 1.5K 5% 1/10W | |
| R014 | 1-216-121-00 | METAL GLAZE 1M 5% 1/10W | |
| R015 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R016 | 1-216-059-00 | METAL GLAZE 2.7K 5% 1/10W | |
| R017 | 1-216-063-00 | METAL GLAZE 3.9K 5% 1/10W | |
| R018 | 1-216-053-00 | METAL GLAZE 1.5K 5% 1/10W | |
| R021 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R022 | 1-216-748-11 | METAL GLAZE 39K 5% 1/10W | |
| R023 | 1-216-091-00 | METAL GLAZE 56K 5% 1/10W | |
| R024 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R025 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R029 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R034 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R044 | 1-216-071-00 | METAL GLAZE 8.2K 5% 1/10W | (UK MODEL) |
| R044 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (AEP MODEL) |
| R046 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (UK MODEL) |
| R047 | 1-216-055-00 | METAL GLAZE 1.8K 5% 1/10W | (UK MODEL) |
| R047 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (AEP MODEL) |
| R048 | 1-216-061-00 | METAL GLAZE 3.3K 5% 1/10W | (UK MODEL) |
| R049 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (UK MODEL) |
| R050 | 1-216-085-00 | METAL GLAZE 33K 5% 1/10W | (UK MODEL) |
| R051 | 1-216-091-00 | METAL GLAZE 56K 5% 1/10W | (UK MODEL) |
| R053 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (UK MODEL) |
| R054 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | (UK MODEL) |
| R056 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (UK MODEL) |
| R062 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (UK MODEL) |
| R065 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (AEP MODEL) |
| R067 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (AEP MODEL) |
| R068 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (AEP MODEL) |
| R069 | 1-216-063-00 | METAL GLAZE 3.9K 5% 1/10W | (AEP MODEL) |
| R070 | 1-216-063-00 | METAL GLAZE 3.9K 5% 1/10W | (AEP MODEL) |
| R071 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (UK MODEL) |
| R072 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (AEP MODEL) |
| R073 | 1-216-063-00 | METAL GLAZE 3.9K 5% 1/10W | (AEP MODEL) |
| R074 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (UK MODEL) |
| R075 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (UK MODEL) |
| R076 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (AEP MODEL) |
| R077 | 1-216-064-00 | METAL GLAZE 4.3K 5% 1/10W | (AEP MODEL) |
| R078 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R079 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R080 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R083 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R090 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R092 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R095 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (UK MODEL) |
| R096 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | (AEP MODEL) |

### VARIABLE RESISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| RV001 | 1-228-995-00 | RES, ADJ, CARBON 22K | (AEP MODEL) |

### TUNER

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| TU001⚠. | 1-465-260-31 | TUNER, ET (BTP-2C401) | (AEP MODEL) |
| TU001⚠. | 1-465-262-31 | TUNER, ET (BTP-2U601) | (UK MODEL) |

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| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| | *A-7061-815-A | PS-196 (A) BOARD, COMPLETE<br>************************** | (AEP MODEL) |
| | *A-7061-898-A | PS-196 (B) BOARD, COMPLETE<br>************************** | (UK MODEL) |
| | 1-533-183-11 | HOLDER, FUSE | |
| | *3-714-460-01 | RETAINER, TRANSISTOR | |
| | 3-731-146-01 | RETAINER (B), PS | |
| | 3-731-147-01 | RETAINER (A), PS | |
| | 7-621-555-60 | SCREW +K 2X10 | |
| | 7-628-253-40 | SCREW +PS 2X10 | |
| | 7-685-647-79 | SCREW +BVTP 3X10 TYPE2 IT-3 | |

### CAPACITOR

| Ref.No | Part No. | Description | | | |
|---|---|---|---|---|---|
| C001 | ⚠.1-136-185-00 | FILM | 0.22MF | 20% | 250V |
| C002 | ⚠.1-136-472-11 | FILM | 0.1MF | 20% | 250V |
| C003 | ⚠.1-162-578-51 | CERAMIC | 0.0047MF | 20% | 400V |
| C004 | ⚠.1-162-578-51 | CERAMIC | 0.0047MF | 20% | 400V |
| C005 | ⚠.1-162-578-51 | CERAMIC | 0.0047MF | 20% | 400V |
| C006 | ⚠.1-162-578-51 | CERAMIC | 0.0047MF | 20% | 400V |
| C007 | ⚠.1-126-538-11 | ELECT | 100MF | 20% | 400V |
| C008 | 1-136-208-11 | FILM | 0.068MF | 10% | 630V |
| C009 | 1-162-558-11 | CERAMIC | 100PF | 10% | 2KV |
| C010 | 1-130-495-00 | MYLAR | 0.1MF | 5% | 50V |
| C011 | 1-126-589-11 | ELECT | 2200MF | 20% | 16V |
| C012 | 1-126-587-11 | ELECT | 330MF | 20% | 16V |
| C013 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C014 | 1-126-588-11 | ELECT | 1000MF | 20% | 16V |
| C015 | 1-126-588-11 | ELECT | 1000MF | 20% | 16V |
| C016 | 1-126-586-11 | ELECT | 470MF | 20% | 10V |
| C017 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |

When indicating parts by reference number, please include the board name.

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

| Ref.No | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C018 | 1-126-586-11 | ELECT | 470MF | 20% | 10V |
| C019 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C020 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C021 | 1-130-473-00 | MYLAR | 0.0015MF | 5% | 50V |
| C022 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C023 | 1-161-043-00 | CERAMIC | 0.0022MF | 10% | 25V |
| C024 | 1-124-570-11 | ELECT | 220MF | 20% | 16V |
| C025 | 1-126-335-11 | ELECT | 220MF | 20% | 10V |
| C026 | 1-126-335-11 | ELECT | 220MF | 20% | 10V |
| C027 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C028 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C029 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C030 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C031 | 1-161-055-00 | CERAMIC | 0.022MF | 10% | 25V |
| C032 | ⚠.1-162-578-51 | CERAMIC | 0.0047MF | 20% | 400V |
| C033 | ⚠.1-162-578-51 | CERAMIC | 0.0047MF | 20% | 400V |
| C034 | ⚠.1-162-578-12 | CERAMIC | 0.0047MF | 20% | 400V |
| C035 | 1-123-381-00 | ELECT | 2.2MF | 20% | 50V |
| C036 | 1-126-588-11 | ELECT | 1000MF | 20% | 16V |
| C037 | 1-161-039-00 | CERAMIC | 0.001MF | 10% | 50V |
| C038 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V |

### CONNECTOR

| Ref.No | Part No. | Description |
|---|---|---|
| CN001 | *1-564-037-11 | PIN, CONNECTOR 12P |
| CN002 | 1-506-484-11 | PIN, CONNECTOR 5P |

### DIODE

| Ref.No | Part No. | Description |
|---|---|---|
| D001 | ⚠.8-719-510-31 | DIODE S2VB60-03L10 |
| D002 | ⚠.8-719-500-70 | DIODE D5S4M |
| D003 | ⚠.8-719-304-50 | THYRISTOR TF341M-A |
| D004 | 8-719-110-22 | DIODE RD11ES-B2 |
| D005 | 8-719-200-62 | DIODE 20E2H |
| D006 | 8-719-200-62 | DIODE 20E2H |
| D007 | ⚠.8-719-300-33 | DIODE RU-3AM |
| D008 | ⚠.8-719-500-70 | DIODE D5S4M |
| D009 | ⚠.8-719-913-44 | DIODE ERA82-004 |
| D010 | 8-719-110-03 | DIODE RD7.5ES-B2 |
| D011 | 8-719-911-19 | DIODE 1SS119 |
| D012 | ⚠.8-719-913-44 | DIODE ERA82-004 |
| D013 | 8-719-901-83 | DIODE 1SS83 |
| D014 | 8-719-901-83 | DIODE 1SS83 |
| D015 | 8-719-110-22 | DIODE RD11ES-B2 |
| D016 | 8-719-911-19 | DIODE 1SS119 |

### FUSE

| Ref.No | Part No. | Description |
|---|---|---|
| F001 | ⚠.1-532-259-00 | FUSE, TIME-LAG (1.6A/250V) |

### IC

| Ref.No | Part No. | Description |
|---|---|---|
| IC001 | ⚠.8-759-979-49 | IC MA2820 |
| IC002 | 8-759-927-49 | IC IR9431 |
| IC003 | ⚠.8-749-920-58 | IC SI-3090CA |
| IC004 | ⚠.8-749-921-21 | IC SI-3120C |
| IC005 | 8-759-632-07 | IC M5237L |
| IC006 | ⚠.8-759-982-52 | IC RC79M05F |
| IC007 | ⚠.8-759-990-33 | IC FA7610P |

### COIL

| Ref.No | Part No. | Description | |
|---|---|---|---|
| L001 | ⚠.1-424-121-11 | TRANSFORMER, LINE FILTER | |
| L002 | 1-421-918-11 | COIL, CHOKE 10UH | |
| L003 | 1-421-918-11 | COIL, CHOKE 10UH | |
| L004 | 1-410-794-11 | INDUCTOR | 330UH |
| L005 | 1-410-667-31 | INDUCTOR | 22UH |
| L006 | 1-410-645-31 | INDUCTOR | 100UH |
| L007 | 1-410-645-31 | INDUCTOR | 100UH |

### PHOTO TRANSISTOR

| Ref.No | Part No. | Description |
|---|---|---|
| PH001 | ⚠.8-719-939-00 | PC111S |

### IC LINK

| Ref.No | Part No. | Description |
|---|---|---|
| PS001 | ⚠.1-532-679-00 | LINK, IC |

### TRANSISTOR

| Ref.No | Part No. | Description |
|---|---|---|
| Q001 | ⚠.8-729-921-41 | TRANSISTOR 2SA1679S |
| Q002 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q003 | 8-729-177-32 | TRANSISTOR 2SD773 |
| Q004 | ⚠.8-729-265-52 | TRANSISTOR 2SC2655 |
| Q005 | 8-729-119-76 | TRANSISTOR 2SA1175HFE |

### RESISTOR

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R002 | ⚠.1-217-294-00 | WIREWOUND | 4.7 | 10% | 5W | F |
| R003 | ⚠.1-215-926-00 | METAL OXIDE | 33K | 5% | 3W | F |
| R004 | ⚠.1-215-926-00 | METAL OXIDE | 33K | 5% | 3W | F |
| R005 | 1-260-041-00 | CARBON | 680K | 5% | 1/2W | |
| R006 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R007 | 1-214-834-00 | METAL | 56 | 1% | 1/2W | |
| R008 | ⚠.1-212-881-11 | FUSIBLE | 100 | 5% | 1/4W | F |
| R009 | 1-214-834-00 | METAL | 56 | 1% | 1/2W | |
| R010 | 1-249-402-11 | CARBON | 56 | 5% | 1/4W | |
| R011 | 1-215-431-00 | METAL | 2.7K | 1% | 1/6W | |
| R012 | 1-215-429-00 | METAL | 2.2K | 1% | 1/6W | |
| R013 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W | |
| R014 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W | |
| R015 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R016 | 1-215-447-00 | METAL | 12K | 1% | 1/6W | |
| R017 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W | |
| R018 | 1-215-437-00 | METAL | 4.7K | 1% | 1/6W | |
| R019 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R020 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W | |
| R021 | 1-247-885-00 | CARBON | 180K | 5% | 1/4W | |
| R022 | 1-247-899-11 | CARBON | 680K | 5% | 1/4W | |
| R023 | 1-249-436-11 | CARBON | 39K | 5% | 1/4W | |
| R024 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W | |
| R025 | 1-215-441-00 | METAL | 6.8K | 1% | 1/6W | |
| R026 | 1-215-429-00 | METAL | 2.2K | 1% | 1/6W | |

When indicating parts by reference number, please include the board name.

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| R027 | 1-215-469-00 | METAL 100K 1% 1/6W | |
| R028 | 1-214-773-00 | METAL 68K 1% 1/4W | |
| R029 | 1-249-411-11 | CARBON 330 5% 1/4W | |
| R030 | 1-249-405-11 | CARBON 100 5% 1/4W | |
| R031 | 1-249-415-11 | CARBON 680 5% 1/4W | |
| R032 | 1-249-429-11 | CARBON 10K 5% 1/4W | |
| R034 | ⚠.1-247-738-11 | CARBON 82 5% 1/2W | F |
| R035 | 1-249-423-11 | CARBON 3.3K 5% 1/4W | |
| R036 | 1-247-725-11 | CARBON 10K 5% 1/4W | |

TRANSFORMER

| Ref.No | Part No. | Description |
|---|---|---|
| T001 | ⚠.1-449-924-11 | TRANSFORMER, RCC CONVERTER |
| T002 | ⚠.1-449-914-11 | TRANSFORMER, CONVERTER |

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*A-7061-816-A DS-35 (A) BOARD, COMPLETE (AEP MODEL)
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*A-7061-892-A DS-35 (B) BOARD, COMPLETE (UK MODEL)
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BUZZER

| Ref.No | Part No. | Description |
|---|---|---|
| BZ001 | 1-529-070-11 | BUZZER |

CAPACITOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| C001 | 1-125-486-11 | DOUBLE LAYER 0.22F 5.5V | |
| C002 | 1-124-446-11 | ELECT 47MF 20% 10V | |
| C003 | 1-164-232-11 | CERAMIC CHIP 0.01MF 50V | |
| C004 | 1-164-232-11 | CERAMIC CHIP 0.01MF 50V | |
| C005 | 1-163-105-00 | CERAMIC CHIP 33PF 5% 50V | |
| C006 | 1-163-105-00 | CERAMIC CHIP 33PF 5% 50V | |
| C007 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% 50V | |
| C008 | 1-123-875-11 | ELECT 10MF 20% 50V | |
| C009 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | |
| C010 | 1-164-232-11 | CERAMIC CHIP 0.01MF 50V | |
| C012 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | (AEP MODEL) |
| C013 | 1-123-875-11 | ELECT 10MF 20% 50V | (AEP MODEL) |
| C014 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | (AEP MODEL) |
| C015 | 1-163-105-00 | CERAMIC CHIP 33PF 5% 50V | (AEP MODEL) |
| C016 | 1-163-105-00 | CERAMIC CHIP 33PF 5% 50V | (AEP MODEL) |
| C017 | 1-163-989-11 | CERAMIC CHIP 0.033MF 10% 25V | (AEP MODEL) |
| C018 | 1-163-077-00 | CERAMIC CHIP 0.1MF 10% 25V | (AEP MODEL) |
| C019 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | (AEP MODEL) |
| C021 | 1-123-875-11 | ELECT 10MF 20% 50V | |
| C024 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | |
| C025 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% 50V | |
| C026 | 1-124-471-00 | ELECT 1000MF 20% 6.3V | |
| C201 | 1-124-443-00 | ELECT 100MF 20% 6.3V | |
| C202 | 1-124-443-00 | ELECT 100MF 20% 6.3V | |
| C209 | 1-163-038-00 | CERAMIC CHIP 0.1MF 25V | |
| C210 | 1-163-038-00 | CERAMIC CHIP 0.1MF 25V | |
| C211 | 1-124-443-00 | ELECT 100MF 20% 6.3V | |
| C212 | 1-124-443-00 | ELECT 100MF 20% 6.3V | |

| Ref.No | Part No. | Description | | Remark |
|---|---|---|---|---|
| C213 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C214 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C215 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C216 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C217 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C218 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C219 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C220 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C221 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C222 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C223 | 1-126-233-11 | ELECT 22MF | 20% | 25V |
| C224 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C225 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C226 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C227 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C228 | 1-163-098-00 | CERAMIC CHIP 16PF | 5% | 50V |
| C229 | 1-163-098-00 | CERAMIC CHIP 16PF | 5% | 50V |
| C230 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C231 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C232 | 1-124-791-11 | ELECT 1MF | 20% | 50V |
| C233 | 1-163-089-00 | CERAMIC CHIP 6PF | 0.25PF | 50V |
| C235 | 1-126-233-11 | ELECT 22MF | 20% | 25V |
| C236 | 1-164-161-11 | CERAMIC CHIP 0.0022MF | 10% | 50V |
| C237 | 1-163-017-00 | CERAMIC CHIP 0.0047MF | 10% | 50V |
| C238 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C239 | 1-163-037-11 | CERAMIC CHIP 0.022MF | 10% | 25V |
| C240 | 1-123-875-11 | ELECT 10MF | 20% | 50V |
| C241 | 1-124-791-11 | ELECT 1MF | 20% | 50V |
| C242 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C243 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C244 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C245 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C246 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C247 | 1-163-103-00 | CERAMIC CHIP 27PF | 5% | 50V |
| C248 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C249 | 1-126-233-11 | ELECT 22MF | 20% | 25V |
| C250 | 1-126-233-11 | ELECT 22MF | 20% | 25V |
| C251 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C252 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C253 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C254 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C255 | 1-163-093-00 | CERAMIC CHIP 10PF | 5% | 50V |
| C256 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C257 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C258 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C259 | 1-124-791-11 | ELECT 1MF | 20% | 50V |
| C260 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C261 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C262 | 1-164-232-11 | CERAMIC CHIP 0.01MF | 10% | 50V |
| C263 | 1-124-791-11 | ELECT 1MF | 20% | 50V |
| C264 | 1-163-097-00 | CERAMIC CHIP 15PF | 5% | 50V |
| C265 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C266 | 1-163-135-00 | CERAMIC CHIP 560PF | 5% | 50V |

When indicating parts by reference number, please include the board name.

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

| Ref.No | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C267 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C268 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C269 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C270 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C271 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C272 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C273 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C274 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C275 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C278 | 1-163-133-00 | CERAMIC CHIP | 470PF | 5% | 50V |
| C279 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C280 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V |
| C281 | 1-163-137-00 | CERAMIC CHIP | 680PF | 5% | 50V |
| C282 | 1-163-011-11 | CERAMIC CHIP | 0.0015MF | 10% | 50V |
| C283 | 1-163-103-00 | CERAMIC CHIP | 27PF | 5% | 50V |
| C284 | 1-163-077-00 | CERAMIC CHIP | 0.1MF | 10% | 25V |
| C285 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C286 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |
| C287 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |
| C288 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C289 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C290 | 1-163-017-00 | CERAMIC CHIP | 0.0047MF | 10% | 50V |
| C291 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |
| C292 | 1-163-037-11 | CERAMIC CHIP | 0.022MF | 10% | 25V |
| C293 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C294 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C295 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C296 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C297 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C299 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C300 | 1-163-113-00 | CERAMIC CHIP | 68PF | 5% | 50V |
| C301 | 1-163-101-00 | CERAMIC CHIP | 22PF | 5% | 50V |
| C303 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C304 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C305 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C307 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C308 | 1-163-011-11 | CERAMIC CHIP | 0.0015MF | 10% | 50V |
| C309 | 1-163-077-00 | CERAMIC CHIP | 0.1MF | 10% | 25V |
| C312 | 1-163-129-00 | CERAMIC CHIP | 330PF | 5% | 50V |
| C313 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C314 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C315 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V |
| C316 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C317 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C318 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C319 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C320 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C321 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C322 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C323 | 1-163-809-11 | CERAMIC CHIP | 0.047MF | 10% | 25V |
| C324 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C325 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C326 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C328 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C329 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C330 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C331 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C332 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C333 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C334 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C335 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C336 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C337 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C338 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C339 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C340 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C341 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C342 | 1-163-113-00 | CERAMIC CHIP | 68PF | 5% | 50V |
| C343 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C344 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C345 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C346 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C347 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C348 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C349 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C350 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C351 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C352 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C353 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C354 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C355 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C356 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C357 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C358 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C359 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C360 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C361 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C362 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C363 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C364 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C365 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C366 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C367 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C368 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C369 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C370 | 1-163-133-00 | CERAMIC CHIP | 470PF | 5% | 50V |
| C371 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V |
| C372 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V |
| C373 | 1-163-137-00 | CERAMIC CHIP | 680PF | 5% | 50V |
| C374 | 1-163-011-11 | CERAMIC CHIP | 0.0015MF | 10% | 50V |
| C375 | 1-163-103-00 | CERAMIC CHIP | 27PF | 5% | 50V |
| C376 | 1-163-077-00 | CERAMIC CHIP | 0.1MF | 10% | 25V |
| C377 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C378 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V |
| C379 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C380 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |

When indicating parts by reference number, please include the board name.

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| Ref.No | Part No. | Description | | Remark |
|---|---|---|---|---|
| C381 | 1-163-016-00 | CERAMIC CHIP 0.0039MF | 10% | 50V |
| C382 | 1-123-875-11 | ELECT 10MF | 20% | 50V |
| C512 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V |
| C513 | 1-163-133-00 | CERAMIC CHIP 470PF | 5% | 50V |
| C514 | 1-163-113-00 | CERAMIC CHIP 68PF | 5% | 50V |
| C515 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V |
| C516 | 1-163-133-00 | CERAMIC CHIP 470PF | 5% | 50V |
| C517 | 1-163-113-00 | CERAMIC CHIP 68PF | 5% | 50V |
| C518 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C519 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V |
| C520 | 1-163-105-00 | CERAMIC CHIP 33PF | 5% | 50V |
| C521 | 1-124-438-00 | ELECT 1MF | 20% | 50V |
| C522 | 1-124-438-00 | ELECT 1MF | 20% | 50V |
| C523 | 1-124-438-00 | ELECT 1MF | 20% | 50V |
| C524 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C525 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C526 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C527 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C528 | 1-126-177-11 | ELECT 100MF | 20% | 6.3V |
| C529 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C530 | 1-126-177-11 | ELECT 100MF | 20% | 6.3V |
| C531 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C532 | 1-126-177-11 | ELECT 100MF | 20% | 6.3V |
| C533 | 1-163-105-00 | CERAMIC CHIP 33PF | 5% | 50V |
| C534 | 1-163-101-00 | CERAMIC CHIP 22PF | 5% | 50V |
| C535 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C536 | 1-163-088-00 | CERAMIC CHIP 5PF | 0.25PF | 50V |
| C537 | 1-163-088-00 | CERAMIC CHIP 5PF | 0.25PF | 50V |
| C538 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C539 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C540 | 1-126-177-11 | ELECT 100MF | 20% | 6.3V |
| C541 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C542 | 1-126-177-11 | ELECT 100MF | 20% | 6.3V |
| C543 | 1-124-438-00 | ELECT 1MF | 20% | 50V |
| C544 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C545 | 1-124-438-00 | ELECT 1MF | 20% | 50V |
| C546 | 1-124-438-00 | ELECT 1MF | 20% | 50V |
| C547 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |
| C548 | 1-126-177-11 | ELECT 100MF | 20% | 6.3V |
| C551 | 1-163-038-00 | CERAMIC CHIP 0.1MF | | 25V |

### FILTER

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| CF001 | 1-567-192-11 | OSCILLATOR, CERAMIC (4MHz) | |
| CF002 | 1-567-192-11 | OSCILLATOR, CERAMIC (4MHz) (AEP MODEL) | |

### CONNECTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| CN001 | 1-575-360-11 | CONNECTOR, FPC/FFC 5P | |
| CN001 | 1-575-391-11 | CABLE, FLAT (1.0MM PITCH) 5P | |
| CN002 | 1-575-366-11 | CONNECTOR, FPC/FFC 9P | |
| CN004 | 1-569-239-11 | SOCKET, CONNECTOR 20P | |
| CN005 | 1-569-239-11 | SOCKET, CONNECTOR 20P | |
| CN006 | 1-563-605-11 | CONNECTOR, FLEXIBLE 28P | |
| CN007 | 1-575-363-11 | CONNECTOR, FPC/FFC 12P | |
| CN007 | 1-575-387-11 | CABLE, FLAT (1.0MM PITCH) 12P | |
| CN008 | 1-575-365-11 | CONNECTOR, FPC/FFC 18P | |
| CN008 | 1-575-390-11 | CABLE, FLAT (1.0MM PITCH) 18P | |
| CN009 | 1-575-365-11 | CONNECTOR, FPC/FFC 18P | |
| CN009 | 1-575-390-11 | CABLE, FLAT (1.0MM PITCH) 18P | |
| CN010 | 1-569-264-11 | CONNECTOR, FPC (ZIF TYPE) 8P | |
| CN012 | 1-506-468-11 | PIN, CONNECTOR 3P | |
| CN201 | 1-568-099-11 | SOCKET, CONNECTOR 18P | |
| CN202 | 1-563-597-11 | CONNECTOR, FLEXIBLE 20P | |
| CN202 | 1-575-456-11 | WIRE, FLAT TYPE (20 CORE) | |

### TRIMMER

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| CV201 | 1-141-245-00 | TRIMMER, CERAMIC | |
| CV202 | 1-141-245-00 | TRIMMER, CERAMIC | |
| CV203 | 1-141-245-00 | TRIMMER, CERAMIC | |
| CV501 | 1-141-245-00 | TRIMMER, CERAMIC | |

### DIODE

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| D001 | 8-719-200-27 | DIODE E10DS2 (AEP MODEL) | |
| D001 | 8-719-202-36 | DIODE E10QS03 (UK MODEL) | |
| D002 | 8-719-200-27 | DIODE E10DS2 (AEP MODEL) | |
| D002 | 8-719-202-36 | DIODE E10QS03 (UK MODEL) | |
| D003 | 8-719-200-27 | DIODE E10DS2 (AEP MODEL) | |
| D003 | 8-719-200-27 | DIODE E10DS2 (UK MODEL) | |
| D004 | 8-719-801-41 | DIODE 1SS196 | |
| D007 | 8-719-400-18 | DIODE MA152WK | |
| D201 | 8-719-104-34 | DIODE 1S2836 | |
| D202 | 8-719-400-18 | DIODE MA152WK | |
| D203 | 8-719-400-18 | DIODE MA152WK | |
| D204 | 8-719-400-18 | DIODE MA152WK | |
| D205 | 8-719-400-18 | DIODE MA152WK | |
| D206 | 8-719-800-76 | DIODE 1SS226 | |
| D207 | 8-719-800-76 | DIODE 1SS226 | |
| D208 | 8-719-800-76 | DIODE 1SS226 | |
| D209 | 8-719-800-76 | DIODE 1SS226 | |
| D210 | 8-719-800-76 | DIODE 1SS226 | |
| D211 | 8-719-800-76 | DIODE 1SS226 | |
| D212 | 8-719-105-92 | DIODE RD5.6MB3 | |

### FERRITE BEAD INDUCTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| FB501 | 1-410-397-21 | FERRITE BEAD INDUCTOR | |

### FILTER

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| FL201 | 1-236-054-11 | FILTER, LC (LOW PASS) | |
| FL501 | 1-236-071-11 | ENCAPSULATED COMPONENT | |
| FL502 | 1-236-071-11 | ENCAPSULATED COMPONENT | |
| FL503 | 1-236-129-11 | ENCAPSULATED COMPONENT | |
| FL504 | 1-236-129-11 | ENCAPSULATED COMPONENT | |
| FL505 | 1-236-129-11 | ENCAPSULATED COMPONENT | |

### IC

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| IC001 | 8-759-149-18 | IC UPD75116-GF-605-3BE | |
| IC002 | 8-759-147-30 | IC UPD75004GB-VSX182 | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| IC003 | 8-759-030-60 | IC SDA5642 | |
| IC004 | 8-759-932-54 | IC BU4066BF | |
| IC005 | 8-759-990-07 | IC TL1596CNS | |
| IC201 | 8-759-009-07 | IC MC14053BF | |
| IC202 | 8-759-009-07 | IC MC14053BF | |
| IC203 | 8-759-009-07 | IC MC14053BF | |
| IC204 | 8-759-633-63 | IC M50455-137FP | |
| IC205 | 8-759-710-29 | IC NJM2235M | |
| IC206 | 8-759-710-09 | IC NJM2233AM | |
| IC207 | 8-759-009-07 | IC MC14053BF | |
| IC208 | 8-759-009-07 | IC MC14053BF | |
| IC209 | 8-759-603-54 | IC M51271FP | |
| IC210 | 8-759-631-10 | IC M52684AFP | |
| IC211 | 8-759-631-10 | IC M52684AFP | |
| IC212 | 8-759-007-69 | IC MC74HC157F | |
| IC213 | 8-759-633-XX | IC M51285BFP-V | |
| IC214 | 8-759-710-29 | IC NJM2235M | |
| IC215 | 8-759-710-07 | IC NJM2234M | |
| IC501 | 8-759-631-06 | IC M50541FP | |
| IC502 | 8-759-605-15 | IC M5M4C500L | |
| IC503 | 8-759-633-04 | IC M52686AFP | |
| IC504 | 8-759-633-96 | IC M52682FP | |
| IC505 | 8-759-925-72 | IC SN74HC02NS | |
| IC506 | 8-759-233-64 | IC TC74HCU04AF | |
| IC507 | 8-759-009-07 | IC MC14053BF | |

COIL

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| L001 | 1-407-169-XX | INDUCTOR 100UH | |
| L002 | 1-407-169-XX | INDUCTOR 100UH | |
| L201 | 1-407-169-XX | INDUCTOR 100UH | |
| L202 | 1-408-975-21 | INDUCTOR 27UH | |
| L203 | 1-408-977-21 | INDUCTOR 39UH | |
| L204 | 1-407-169-XX | INDUCTOR 100UH | |
| L205 | 1-412-143-11 | MICRO INDUCTOR (39UH) | |
| L206 | 1-408-978-21 | INDUCTOR 47UH | |
| L207 | 1-407-169-XX | INDUCTOR 100UH | |
| L209 | 1-408-970-21 | INDUCTOR 10UH | |
| L210 | 1-408-970-21 | INDUCTOR 10UH | |
| L211 | 1-408-970-21 | INDUCTOR 10UH | |
| L212 | 1-408-970-21 | INDUCTOR 10UH | |
| L213 | 1-407-169-XX | INDUCTOR 100UH | |
| L501 | 1-408-978-21 | INDUCTOR 47UH | |
| L502 | 1-407-169-XX | INDUCTOR 100UH | |

TRANSISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| Q001 | 8-729-901-04 | TRANSISTOR DTA114EK | |
| Q002 | 8-729-901-04 | TRANSISTOR DTA114EK | |
| Q003 | 8-729-807-87 | TRANSISTOR 2SB1295-UL6 | |
| Q004 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q005 | 8-729-805-25 | TRANSISTOR 2SB1121 | |
| Q006 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q007 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q015 | 8-729-901-00 | TRANSISTOR DTC124EK | |

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| Q016 | 8-729-901-04 | TRANSISTOR DTA114EK | |
| Q017 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q201 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q202 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q203 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q207 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q208 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q209 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q210 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q211 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q212 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q213 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q214 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q215 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q216 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q217 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q218 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q219 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q220 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q221 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q222 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q223 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q224 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q225 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q226 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q227 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q228 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q229 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q230 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q231 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q232 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q233 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q234 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q235 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q236 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q237 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q238 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q239 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q240 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q241 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q242 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q243 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q244 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q245 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q246 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q247 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q248 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q249 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q250 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q251 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q252 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q253 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q254 | 8-729-100-66 | TRANSISTOR 2SC1623 | |

When indicating parts by reference number, please include the board name.

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| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| Q255 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q256 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q257 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q258 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q259 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q260 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q261 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q262 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q263 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q264 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q265 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q266 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q267 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q268 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q269 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q270 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q271 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q272 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q273 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q274 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q275 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q276 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q277 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q278 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q501 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q502 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q503 | 8-729-216-22 | TRANSISTOR 2SA1162 | |

### RESISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| R003 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R004 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R005 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R006 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R007 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R008 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R009 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R010 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R011 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R012 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R013 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R014 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R015 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R016 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R017 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R018 | 1-216-596-11 | METAL GLAZE 2.7K 1% 1/10W | |
| R019 | 1-216-121-00 | METAL GLAZE 1M 5% 1/10W | (AEP MODEL) |
| R020 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R021 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R022 | 1-216-162-00 | METAL GLAZE 33 5% 1/8W | |
| R023 | 1-216-162-00 | METAL GLAZE 33 5% 1/8W | |
| R024 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R025 | 1-216-069-00 | METAL GLAZE 6.8K 5% 1/10W | |
| R026 | 1-216-069-00 | METAL GLAZE 6.8K 5% 1/10W | |
| R027 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R037 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | (AEP MODEL) |
| R038 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | (AEP MODEL) |
| R039 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | (AEP MODEL) |
| R040 | 1-216-119-00 | METAL GLAZE 820K 5% 1/10W | (AEP MODEL) |
| R041 | 1-216-066-00 | METAL GLAZE 5.1K 5% 1/10W | (AEP MODEL) |
| R042 | 1-216-119-00 | METAL GLAZE 820K 5% 1/10W | (AEP MODEL) |
| R043 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | (AEP MODEL) |
| R044 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R045 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R046 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R050 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R052 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R053 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| R056 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R058 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R059 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| R060 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R061 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R062 | 1-216-061-00 | METAL GLAZE 3.3K 5% 1/10W | |
| R063 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R064 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R065 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R067 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R068 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R069 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R071 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | (AEP MODEL) |
| R072 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | (AEP MODEL) |
| R074 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R075 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R076 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R201 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R202 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R203 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R204 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R205 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R206 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R207 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R208 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R209 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R211 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R214 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R217 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R219 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R220 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R221 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R222 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R223 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R224 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R225 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R226 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R227 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R228 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R229 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R230 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R231 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R232 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R233 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R234 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R235 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R236 | 1-216-031-00 | METAL GLAZE | 180 | 5% | 1/10W | |
| R237 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R238 | 1-216-039-00 | METAL GLAZE | 390 | 5% | 1/10W | |
| R239 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R240 | 1-216-031-00 | METAL GLAZE | 180 | 5% | 1/10W | |
| R241 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R242 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R243 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R244 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R245 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R247 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R248 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R249 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R250 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R251 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R252 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R253 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R254 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R255 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R256 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R257 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R258 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R259 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R260 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R261 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R262 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R263 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R264 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R265 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R266 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R267 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R268 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R269 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R270 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R271 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R272 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R273 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R274 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R275 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R276 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R277 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R278 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R279 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R280 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R281 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R282 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R283 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R284 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R285 | 1-216-021-00 | METAL GLAZE | 68 | 5% | 1/10W | |
| R286 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R287 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R288 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R291 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R292 | 1-216-095-00 | METAL GLAZE | 82K | 5% | 1/10W | |
| R293 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R294 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R295 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R296 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R297 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R298 | 1-216-101-00 | METAL GLAZE | 150K | 5% | 1/10W | |
| R299 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R300 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R301 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R302 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R303 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R304 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R305 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R306 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R307 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R308 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R309 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R330 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R331 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R332 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R333 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R334 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R335 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R336 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R337 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R338 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R339 | 1-216-039-00 | METAL GLAZE | 390 | 5% | 1/10W | |
| R340 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R341 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R342 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R343 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R344 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R345 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R346 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R347 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R348 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R349 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R350 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R351 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R352 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R353 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R354 | 1-216-095-00 | METAL GLAZE | 82K | 5% | 1/10W | |
| R355 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R356 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R357 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |

When indicating parts by reference number, please include the board name.

# DS-35

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R358 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R359 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R361 | 1-216-095-00 | METAL GLAZE | 82K | 5% | 1/10W | |
| R362 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W | |
| R363 | 1-216-019-00 | METAL GLAZE | 56 | 5% | 1/10W | |
| R364 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R365 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R366 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R367 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R369 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R370 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R371 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R372 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R373 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R374 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R375 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R376 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R377 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R378 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R379 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R380 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R381 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R382 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R383 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R384 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R385 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R386 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R387 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R388 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R389 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R390 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R391 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R392 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R393 | 1-216-048-00 | METAL GLAZE | 910 | 5% | 1/10W | |
| R394 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R395 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R396 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R397 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R398 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R399 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R400 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R401 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R402 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R403 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R404 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R405 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R406 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R407 | 1-216-309-00 | METAL GLAZE | 5.6 | 5% | 1/10W | |
| R408 | 1-216-309-00 | METAL GLAZE | 5.6 | 5% | 1/10W | |
| R409 | 1-216-022-00 | METAL GLAZE | 75 | 5% | 1/10W | |
| R410 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R411 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R412 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R413 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R414 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R415 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R416 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R417 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R418 | 1-216-309-00 | METAL GLAZE | 5.6 | 5% | 1/10W | |
| R419 | 1-216-309-00 | METAL GLAZE | 5.6 | 5% | 1/10W | |
| R420 | 1-216-022-00 | METAL GLAZE | 75 | 5% | 1/10W | |
| R421 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R422 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R423 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R424 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R425 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R426 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R427 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R428 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R429 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R430 | 1-216-309-00 | METAL GLAZE | 5.6 | 5% | 1/10W | |
| R431 | 1-216-309-00 | METAL GLAZE | 5.6 | 5% | 1/10W | |
| R432 | 1-216-022-00 | METAL GLAZE | 75 | 5% | 1/10W | |
| R433 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R434 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R435 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R436 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R437 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R438 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R439 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R440 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R441 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R442 | 1-216-309-00 | METAL GLAZE | 5.6 | 5% | 1/10W | |
| R443 | 1-216-309-00 | METAL GLAZE | 5.6 | 5% | 1/10W | |
| R444 | 1-216-022-00 | METAL GLAZE | 75 | 5% | 1/10W | |
| R445 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R446 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R447 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R448 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R449 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R450 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R451 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R452 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R453 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R454 | 1-216-309-00 | METAL GLAZE | 5.6 | 5% | 1/10W | |
| R455 | 1-216-309-00 | METAL GLAZE | 5.6 | 5% | 1/10W | |
| R456 | 1-216-022-00 | METAL GLAZE | 75 | 5% | 1/10W | |
| R457 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R458 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R459 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R460 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R461 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R462 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R463 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R464 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R465 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| R466 | 1-216-309-00 | METAL GLAZE 5.6 5% 1/10W | |
| R467 | 1-216-309-00 | METAL GLAZE 5.6 5% 1/10W | |
| R468 | 1-216-022-00 | METAL GLAZE 75 5% 1/10W | |
| R469 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R470 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R471 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R472 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R473 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R474 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R475 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R476 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R477 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R478 | 1-216-101-00 | METAL GLAZE 150K 5% 1/10W | |
| R479 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R480 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R481 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R482 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R483 | 1-216-035-00 | METAL GLAZE 270 5% 1/10W | |
| R484 | 1-216-053-00 | METAL GLAZE 1.5K 5% 1/10W | |
| R485 | 1-216-053-00 | METAL GLAZE 1.5K 5% 1/10W | |
| R486 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R487 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R488 | 1-216-113-00 | METAL GLAZE 470K 5% 1/10W | |
| R489 | 1-216-022-00 | METAL GLAZE 75 5% 1/10W | |
| R490 | 1-216-091-00 | METAL GLAZE 56K 5% 1/10W | |
| R491 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R492 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R501 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R502 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R503 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R504 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R505 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R506 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R507 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R508 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R509 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R510 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R511 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R512 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R513 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R514 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R515 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R516 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R517 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R518 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R519 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R520 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R521 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R522 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R523 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R524 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R525 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R526 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R527 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R528 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R529 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R530 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R531 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R532 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R533 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R534 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R535 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R537 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R538 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R539 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R540 | 1-216-121-00 | METAL GLAZE 1M 5% 1/10W | |
| R541 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R542 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R543 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R544 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R545 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R546 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R547 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |

### VARIABLE RESISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| RV201 | 1-228-996-00 | RES, ADJ, CARBON 47K | |
| RV202 | 1-228-996-00 | RES, ADJ, CARBON 47K | |
| RV203 | 1-228-990-00 | RES, ADJ, CARBON 1K | |
| RV204 | 1-228-990-00 | RES, ADJ, CARBON 1K | |
| RV205 | 1-228-993-00 | RES, ADJ, CARBON 4.7K | |
| RV206 | 1-228-990-00 | RES, ADJ, CARBON 1K | |

### CRYSTAL

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| X201 | 1-577-289-11 | VIBRATOR, CRYSTAL (17.7MHz) | |
| X202 | 1-567-733-11 | VIBRATOR, CRYSTAL (17.7MHz) | |
| X203 | 1-577-165-11 | VIBLATOR, CERAMIC (500kHz) | |
| X204 | 1-567-733-11 | VIBRATOR, CRYSTAL (17.7MHz) | |
| X205 | 1-577-165-11 | VIBLATOR, CERAMIC (500kHz) | |
| X206 | 1-577-165-11 | VIBLATOR, CERAMIC (500kHz) | |
| X501 | 1-577-164-11 | VIBLATOR, CERAMIC (30.2MHz) | |

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*1-633-526-11 IN-24 BOARD
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### CONNECTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| CN501 | *1-506-484-11 | PIN, CONNECTOR 5P | |
| CN502 | 1-568-096-11 | CONNECTOR (PLUG) 26P | |
| CN503 | 1-506-483-21 | PIN, CONNECTOR 4P | |
| CN504 | 1-568-094-11 | CONNECTOR (PLUG) 22P | |
| CN505 | *1-568-098-11 | CONNECTOR (PLUG) 30P | |
| CN506 | *1-568-098-11 | CONNECTOR (PLUG) 30P | |
| CN507 | 1-568-092-11 | CONNECTOR (PLUG) 18P | |
| CN508 | 1-568-090-11 | CONNECTOR (PLUG) 14P | |
| CN509 | *1-564-988-11 | PIN, CONNECTOR 14P | |
| CN510 | *1-566-668-11 | PIN, CONNECTOR 20P | |

When indicating parts by reference number, please include the board name.

# IN-24 FJ-2 YC-64

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| CN511 | *1-566-668-11 | PIN, CONNECTOR 20P | |
| CN512 | *1-566-667-11 | PIN, CONNECTOR 18P | |
| CN513 | *1-563-633-11 | CONNECTOR, FLEXIBLE 30P | |

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*A-7061-890-A FJ-2 BOARD, COMPLETE

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### CAPACITOR

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| C107 | 1-135-156-21 | TANTAL. CHIP | 6.8MF | 20% | 6.3V | |
| C108 | 1-135-156-21 | TANTAL. CHIP | 6.8MF | 20% | 6.3V | |
| C109 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V | |
| C110 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V | |
| C111 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V | |
| C112 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V | |
| C113 | 1-135-091-00 | TANTAL. CHIP | 1MF | 20% | 16V | |
| C114 | 1-135-091-00 | TANTAL. CHIP | 1MF | 20% | 16V | |
| C115 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V | |
| C116 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V | |
| C117 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V | |
| C120 | 1-135-091-00 | TANTAL. CHIP | 1MF | 20% | 16V | |
| C121 | 1-135-091-00 | TANTAL. CHIP | 1MF | 20% | 16V | |

### DIODE

| Ref.No | Part No. | Description |
|---|---|---|
| D101 | 8-719-104-34 | DIODE 1S2836 |

### IC

| Ref.No | Part No. | Description |
|---|---|---|
| IC103 | 8-759-111-56 | IC UPC4572G2 |

### JACK

| Ref.No | Part No. | Description |
|---|---|---|
| J101 | 1-565-735-21 | JACK, PIN 3P (LINE IN 2) |

### JUMPER RESISTOR

| Ref.No | Part No. | Description | | | |
|---|---|---|---|---|---|
| JR101 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W |
| JR102 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W |
| JR103 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W |
| JR104 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W |

### RESISTOR

| Ref.No | Part No. | Description | | | |
|---|---|---|---|---|---|
| R135 | 1-216-001-00 | METAL GLAZE | 10 | 5% | 1/10W |
| R136 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W |
| R137 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W |
| R138 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W |
| R139 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W |
| R140 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R141 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R142 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W |
| R143 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W |
| R150 | 1-216-022-00 | METAL GLAZE | 75 | 5% | 1/10W |

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*A-7061-896-A YC-64 (B) BOARD, COMPLETE (UK MODEL)

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*A-7061-900-A YC-64 (A) BOARD, COMPLETE (AEP MODEL)

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### CAPACITOR

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| C001 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | |
| C002 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C003 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C004 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V | |
| C005 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V | |
| C007 | 1-163-097-00 | CERAMIC CHIP | 15PF | 5% | 50V | |
| C008 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | (AEP MODEL) |
| C009 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | (AEP MODEL) |
| C010 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | |
| C011 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | |
| C012 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C013 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V | |
| C014 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V | |
| C015 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C016 | 1-163-097-00 | CERAMIC CHIP | 15PF | 5% | 50V | |
| C017 | 1-163-123-00 | CERAMIC CHIP | 180PF | 5% | 50V | |
| C018 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V | |
| C019 | 1-163-119-00 | CERAMIC CHIP | 120PF | 5% | 50V | |
| C020 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V | |
| C021 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | |
| C022 | 1-163-103-00 | CERAMIC CHIP | 27PF | 5% | 50V | |
| C023 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V | |
| C024 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C025 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C026 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V | |
| C027 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V | |
| C028 | 1-123-875-11 | ELECT | 10MF | 20% | 50V | |
| C029 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C030 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C031 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | |
| C032 | 1-126-233-11 | ELECT | 22MF | 20% | 25V | |
| C033 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C034 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C035 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C036 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C037 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V | |
| C038 | 1-163-101-00 | CERAMIC CHIP | 22PF | 5% | 50V | (AEP MODEL) |
| C039 | 1-163-115-00 | CERAMIC CHIP | 82PF | 5% | 50V | (AEP MODEL) |
| C040 | 1-163-115-00 | CERAMIC CHIP | 82PF | 5% | 50V | (AEP MODEL) |
| C043 | 1-163-124-00 | CERAMIC CHIP | 200PF | 5% | 50V | (AEP MODEL) |
| C044 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V | (AEP MODEL) |
| C045 | 1-163-115-00 | CERAMIC CHIP | 82PF | 5% | 50V | (AEP MODEL) |
| C046 | 1-163-103-00 | CERAMIC CHIP | 27PF | 5% | 50V | (AEP MODEL) |
| C047 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C048 | 1-163-038-00 | CERAMIC CHIP | 0.1MF | | 25V | |
| C201 | 1-163-117-00 | CERAMIC CHIP | 100PF | 5% | 50V | (AEP MODEL) |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| C202 | 1-163-133-00 | CERAMIC CHIP 47PF 5% 50V | (AEP MODEL) |
| C203 | 1-164-232-11 | CERAMIC CHIP 0.01MF 50V | (AEP MODEL) |
| C204 | 1-123-875-11 | ELECT 10MF 20% 50V | (AEP MODEL) |
| C205 | 1-164-232-11 | CERAMIC CHIP 0.01MF 50V | (AEP MODEL) |
| C206 | 1-164-232-11 | CERAMIC CHIP 0.01MF 50V | (AEP MODEL) |
| C207 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | (AEP MODEL) |
| C208 | 1-123-875-11 | ELECT 10MF 20% 50V | (AEP MODEL) |
| C209 | 1-163-118-00 | CERAMIC CHIP 110PF 5% 50V | (AEP MODEL) |
| C210 | 1-163-103-00 | CERAMIC CHIP 27PF 5% 50V | (AEP MODEL) |
| C212 | 1-163-118-00 | CERAMIC CHIP 110PF 5% 50V | (AEP MODEL) |
| C213 | 1-163-103-00 | CERAMIC CHIP 27PF 5% 50V | (AEP MODEL) |
| C214 | 1-163-038-00 | CERAMIC CHIP 0.1MF 25V | (AEP MODEL) |
| C216 | 1-124-791-11 | ELECT 1MF 20% 50V | (AEP MODEL) |
| C217 | 1-163-017-00 | CERAMIC CHIP 0.0047MF 10% 50V | (AEP MODEL) |
| C218 | 1-163-009-11 | CERAMIC CHIP 0.001MF 10% 50V | (AEP MODEL) |
| C219 | 1-124-927-11 | ELECT 4.7MF 20% 50V | (AEP MODEL) |
| C220 | 1-123-875-11 | ELECT 10MF 20% 50V | (AEP MODEL) |
| C221 | 1-123-875-11 | ELECT 10MF 20% 50V | (AEP MODEL) |
| C222 | 1-164-232-11 | CERAMIC CHIP 0.01MF 50V | (AEP MODEL) |
| C223 | 1-123-875-11 | ELECT 10MF 20% 50V | (AEP MODEL) |
| C224 | 1-163-035-00 | CERAMIC CHIP 0.047MF 50V | (AEP MODEL) |
| C225 | 1-163-123-00 | CERAMIC CHIP 180PF 5% 50V | (AEP MODEL) |
| C226 | 1-163-105-00 | CERAMIC CHIP 33PF 5% 50V | (AEP MODEL) |
| C228 | 1-163-123-00 | CERAMIC CHIP 180PF 5% 50V | (AEP MODEL) |
| C229 | 1-163-105-00 | CERAMIC CHIP 33PF 5% 50V | (AEP MODEL) |
| C231 | 1-124-791-11 | ELECT 1MF 20% 50V | (AEP MODEL) |
| C232 | 1-124-791-11 | ELECT 1MF 20% 50V | (AEP MODEL) |
| C233 | 1-163-121-00 | CERAMIC CHIP 150PF 5% 50V | (AEP MODEL) |
| C234 | 1-163-141-00 | CERAMIC CHIP 0.001MF 5% 50V | (AEP MODEL) |
| C235 | 1-164-232-11 | CERAMIC CHIP 0.01MF 50V | (AEP MODEL) |
| C236 | 1-123-875-11 | ELECT 10MF 20% 50V | (AEP MODEL) |
| C237 | 1-126-233-11 | ELECT 22MF 20% 25V | (AEP MODEL) |
| C238 | 1-123-875-11 | ELECT 10MF 20% 50V | (AEP MODEL) |
| C239 | 1-164-232-11 | CERAMIC CHIP 0.01MF 50V | (AEP MODEL) |
| C241 | 1-126-233-11 | ELECT 22MF 20% 25V | (AEP MODEL) |
| C242 | 1-163-125-00 | CERAMIC CHIP 220PF 5% 50V | (AEP MODEL) |
| C243 | 1-163-125-00 | CERAMIC CHIP 220PF 5% 50V | (AEP MODEL) |
| C301 | 1-126-233-11 | ELECT 22MF 20% 25V | |
| C302 | 1-163-103-00 | CERAMIC CHIP 27PF 5% 50V | |
| C303 | 1-164-232-11 | CERAMIC CHIP 0.01MF 50V | |
| C304 | 1-126-233-11 | ELECT 22MF 20% 25V | |
| C305 | 1-163-038-00 | CERAMIC CHIP 0.1MF 25V | |
| C306 | 1-163-038-00 | CERAMIC CHIP 0.1MF 25V | |
| C307 | 1-124-443-00 | ELECT 100MF 20% 6.3V | |
| C308 | 1-124-443-00 | ELECT 100MF 20% 6.3V | |
| C309 | 1-126-233-11 | ELECT 22MF 20% 25V | |
| C310 | 1-164-232-11 | CERAMIC CHIP 0.01MF 50V | |

### CONNECTOR

| | | | |
|---|---|---|---|
| CN001 | 1-506-469-11 | PIN, CONNECTOR 4P | |
| CN002 | 1-506-469-11 | PIN, CONNECTOR 4P | |
| CN003 | 1-568-078-11 | CONNECTOR (RECEPTALE) 18P | |
| CN004 | 1-568-076-11 | CONNECTOR (RECEPTALE) 14P | |

### DIODE

| | | | |
|---|---|---|---|
| D002 | 8-719-400-18 | DIODE MA152WK | |
| D003 | 8-719-104-34 | DIODE 1S2836 | |
| D004 | 8-719-400-18 | DIODE MA152WK | |

### DELAY LINE

| | | | |
|---|---|---|---|
| DL201 | 1-415-313-00 | DELAY LINE (1H) | (AEP MODEL) |

### FILTER

| | | | |
|---|---|---|---|
| FL001 | 1-409-470-11 | FILTER, TRAP | |
| FL002 | 1-415-719-11 | DELAY LINE | |

### IC

| | | | |
|---|---|---|---|
| IC001 | 8-759-009-06 | IC MC14052BF | |
| IC002 | 8-759-009-07 | IC MC14053BF | |
| IC003 | 8-759-009-07 | IC MC14053BF | |
| IC004 | 8-759-009-07 | IC MC14053BF | |
| IC201 | 8-752-035-00 | IC CXA1227Q | (AEP MODEL) |
| IC202 | 8-752-034-04 | IC CXA1219M | (AEP MODEL) |

### COIL

| | | | |
|---|---|---|---|
| L001 | 1-408-420-00 | INDUCTOR 82UH | |
| L002 | 1-408-407-00 | INDUCTOR 6.8UH | |
| L004 | 1-408-417-00 | INDUCTOR 47UH | |
| L005 | 1-408-418-00 | INDUCTOR 56UH | (AEP MODEL) |
| L006 | 1-408-421-00 | INDUCTOR 100UH | (AEP MODEL) |
| L007 | 1-408-418-00 | INDUCTOR 56UH | (AEP MODEL) |
| L008 | 1-408-419-00 | INDUCTOR 68UH | (AEP MODEL) |
| L009 | 1-408-418-00 | INDUCTOR 56UH | (AEP MODEL) |
| L201 | 1-408-408-00 | INDUCTOR 8.2UH | (AEP MODEL) |
| L202 | 1-408-408-00 | INDUCTOR 8.2UH | (AEP MODEL) |
| L203 | 1-408-410-00 | INDUCTOR 12UH | (AEP MODEL) |
| L204 | 1-408-410-00 | INDUCTOR 12UH | (AEP MODEL) |
| L205 | 1-408-409-00 | INDUCTOR 10UH | (AEP MODEL) |
| L206 | 1-408-409-00 | INDUCTOR 10UH | (AEP MODEL) |
| L207 | 1-408-421-00 | INDUCTOR 100UH | (AEP MODEL) |
| L208 | 1-408-413-00 | INDUCTOR 22UH | (AEP MODEL) |
| L209 | 1-408-413-00 | INDUCTOR 22UH | (AEP MODEL) |
| L301 | 1-408-417-00 | INDUCTOR 47UH | |

### VARIABLE COIL

| | | | |
|---|---|---|---|
| LV201 | 1-408-530-00 | COIL, VARIABLE | (AEP MODEL) |
| LV202 | 1-408-532-00 | COIL, VARIABLE | (AEP MODEL) |
| LV203 | 1-408-532-00 | COIL, VARIABLE | (AEP MODEL) |

### TRANSISTOR

| | | | |
|---|---|---|---|
| Q001 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q002 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q003 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q004 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q005 | 8-729-100-66 | TRANSISTOR 2SC1623 | |

When indicating parts by reference number, please include the board name.

# YC-64

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| Q006 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q007 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q008 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q009 | 8-729-100-66 | TRANSISTOR 2SC1623 (AEP MODEL) | |
| Q010 | 8-729-100-66 | TRANSISTOR 2SC1623 (AEP MODEL) | |
| Q011 | 8-729-100-66 | TRANSISTOR 2SC1623 (AEP MODEL) | |
| Q012 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q013 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q014 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q015 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q016 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q017 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q018 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q019 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q020 | 8-729-100-62 | TRANSISTOR 2SC1623 (AEP MODEL) | |
| Q021 | 8-729-901-01 | TRANSISTOR DTC144EK (AEP MODEL) | |
| Q022 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q023 | 8-729-216-22 | TRANSISTOR 2SA1162 (AEP MODEL) | |
| Q024 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q025 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q026 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q027 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q028 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q029 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q030 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q031 | 8-729-100-66 | TRANSISTOR 2SC1623 (AEP MODEL) | |
| Q032 | 8-729-100-66 | TRANSISTOR 2SC1623 (AEP MODEL) | |
| Q201 | 8-729-100-66 | TRANSISTOR 2SC1623 (AEP MODEL) | |
| Q202 | 8-729-100-66 | TRANSISTOR 2SC1623 (AEP MODEL) | |
| Q203 | 8-729-100-66 | TRANSISTOR 2SC1623 (AEP MODEL) | |
| Q301 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q302 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q303 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q304 | 8-729-100-66 | TRANSISTOR 2SC1623 | |

### RESISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| R001 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R002 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R003 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R004 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R005 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R006 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R007 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R009 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R010 | 1-216-042-00 | METAL GLAZE 510 5% 1/10W | |
| R011 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R012 | 1-216-051-00 | METAL GLAZE 1.2K 5% 1/10W | |
| R013 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R014 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R015 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R016 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R018 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R019 | 1-216-042-00 | METAL GLAZE 510 5% 1/10W | |
| R020 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R021 | 1-216-051-00 | METAL GLAZE 1.2K 5% 1/10W | |
| R022 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R023 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W (AEP MODEL) | |
| R024 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W (AEP MODEL) | |
| R025 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W (AEP MODEL) | |
| R026 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W (AEP MODEL) | |
| R027 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W (AEP MODEL) | |
| R028 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W (AEP MODEL) | |
| R029 | 1-216-051-00 | METAL GLAZE 1.2K 5% 1/10W (AEP MODEL) | |
| R030 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W (AEP MODEL) | |
| R040 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R041 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R042 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W (AEP MODEL) | |
| R043 | 1-216-061-00 | METAL GLAZE 3.3K 5% 1/10W (AEP MODEL) | |
| R044 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W (AEP MODEL) | |
| R045 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R046 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R047 | 1-216-043-00 | METAL GLAZE 560 5% 1/10W | |
| R048 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R049 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R050 | 1-216-043-00 | METAL GLAZE 560 5% 1/10W | |
| R051 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R052 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R053 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R054 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R055 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R056 | 1-216-035-00 | METAL GLAZE 270 5% 1/10W | |
| R057 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R058 | 1-216-039-00 | METAL GLAZE 390 5% 1/10W | |
| R059 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R060 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R061 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W | |
| R062 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R063 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W | |
| R064 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R065 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W (AEP MODEL) | |
| R066 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W (AEP MODEL) | |
| R067 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W (AEP MODEL) | |
| R068 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R069 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R070 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R071 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R072 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | |
| R073 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R074 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R075 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R076 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R077 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R078 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R079 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R080 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R081 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| R082 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R083 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R084 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R085 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R086 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R087 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R088 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | (AEP MODEL) |
| R089 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W | (AEP MODEL) |
| R090 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W | (AEP MODEL) |
| R091 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | (AEP MODEL) |
| R092 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W | (AEP MODEL) |
| R093 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W | (AEP MODEL) |
| R094 | 1-216-047-00 | METAL GLAZE 820 5% 1/10W | (AEP MODEL) |
| R095 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R096 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R097 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R098 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R099 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R100 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R201 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | (AEP MODEL) |
| R202 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | (AEP MODEL) |
| R203 | 1-216-039-00 | METAL GLAZE 390 5% 1/10W | (AEP MODEL) |
| R204 | 1-216-039-00 | METAL GLAZE 390 5% 1/10W | (AEP MODEL) |
| R206 | 1-216-039-00 | METAL GLAZE 390 5% 1/10W | (AEP MODEL) |
| R207 | 1-216-039-00 | METAL GLAZE 390 5% 1/10W | (AEP MODEL) |
| R208 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | (AEP MODEL) |
| R209 | 1-216-097-00 | METAL GLAZE 100K 5% 1/10W | (AEP MODEL) |
| R210 | 1-216-121-00 | METAL GLAZE 1M 5% 1/10W | (AEP MODEL) |
| R211 | 1-216-079-00 | METAL GLAZE 18K 5% 1/10W | (AEP MODEL) |
| R212 | 1-216-128-11 | METAL GLAZE 2M 5% 1/10W | (AEP MODEL) |
| R213 | 1-216-077-00 | METAL GLAZE 15K 5% 1/10W | (AEP MODEL) |
| R214 | 1-216-060-00 | METAL GLAZE 3K 5% 1/10W | (AEP MODEL) |
| R215 | 1-216-067-00 | METAL GLAZE 5.6K 5% 1/10W | (AEP MODEL) |
| R216 | 1-216-060-00 | METAL GLAZE 3K 5% 1/10W | (AEP MODEL) |
| R217 | 1-216-067-00 | METAL GLAZE 5.6K 5% 1/10W | (AEP MODEL) |
| R218 | 1-216-077-00 | METAL GLAZE 15K 5% 1/10W | (AEP MODEL) |
| R219 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (AEP MODEL) |
| R220 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | (AEP MODEL) |
| R221 | 1-216-685-11 | METAL CHIP 27K 0.50% 1/10W | (AEP MODEL) |
| R222 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | (AEP MODEL) |
| R223 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | (AEP MODEL) |
| R225 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | (AEP MODEL) |
| R226 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | (AEP MODEL) |
| R301 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R302 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R303 | 1-216-035-00 | METAL GLAZE 270 5% 1/10W | |
| R304 | 1-216-017-00 | METAL GLAZE 47 5% 1/10W | |
| R305 | 1-216-039-00 | METAL GLAZE 390 5% 1/10W | |
| R306 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R307 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R308 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W | |
| R309 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R310 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W | |

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| R311 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |

VARIABLE RESISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| RV201 | 1-228-996-00 | RES, ADJ, CARBON 47K | (AEP MODEL) |
| RV202 | 1-228-994-00 | RES, ADJ, CARBON 10K | (AEP MODEL) |
| RV203 | 1-228-994-00 | RES, ADJ, CARBON 10K | (AEP MODEL) |

CRYSTAL

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| X201 | 1-577-117-21 | VIBRATOR, CRYSTAL (4.43MHz) | (AEP MODEL) |

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*A-7061-940-A PC-39 (A) BOARD, COMPLETE
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CAPACITOR

| Ref.No | Part No. | Description | | | |
|---|---|---|---|---|---|
| C150 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V |
| C152 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |
| C401 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C402 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C403 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C404 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C407 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C408 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C409 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C410 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C411 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C412 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C413 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C414 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C420 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C421 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C501 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C502 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C503 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C504 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C505 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C506 | 1-164-004-11 | CERAMIC CHIP | 0.1MF | 10% | 25V |
| C507 | 1-124-239-00 | ELECT | 6.8MF | 20% | 25V |
| C508 | 1-164-004-11 | CERAMIC CHIP | 0.1MF | 10% | 25V |
| C510 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C516 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C517 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C518 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C519 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C521 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C522 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C523 | 1-163-011-11 | CERAMIC CHIP | 0.0015MF | 10% | 50V |
| C524 | 1-163-010-11 | CERAMIC CHIP | 0.0012MF | 10% | 50V |
| C525 | 1-163-989-11 | CERAMIC CHIP | 0.033MF | 10% | 25V |
| C526 | 1-163-989-11 | CERAMIC CHIP | 0.033MF | 10% | 25V |
| C527 | 1-163-010-11 | CERAMIC CHIP | 0.0012MF | 10% | 50V |
| C528 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |

When indicating parts by reference number, please include the board name.

# PC-39

| Ref.No | Part No. | Description | | Remark |
|---|---|---|---|---|
| C529 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C530 | 1-163-121-00 | CERAMIC CHIP 150PF | 5% | 50V |
| C531 | 1-124-927-11 | ELECT 4.7MF | 20% | 50V |
| C535 | 1-123-875-11 | ELECT 10MF | 20% | 50V |
| C536 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C537 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C538 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C539 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C540 | 1-164-232-11 | CERAMIC CHIP 0.01MF | | 50V |
| C542 | 1-164-232-11 | CERAMIC CHIP 0.01MF | 10% | 50V |
| C556 | 1-124-927-11 | ELECT 4.7MF | 20% | 50V |
| C557 | 1-161-051-00 | CERAMIC 0.01MF | 10% | 25V |
| C558 | 1-163-009-11 | CERAMIC CHIP 0.001MF | 10% | 50V |
| C601 | 1-126-176-11 | ELECT 220MF | 20% | 6.3V |
| C602 | 1-126-176-11 | ELECT 220MF | 20% | 6.3V |
| C603 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C604 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C611 | 1-124-791-11 | ELECT 1MF | 20% | 50V |
| C612 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C613 | 1-163-109-00 | CERAMIC CHIP 47PF | 5% | 50V |
| C614 | 1-124-791-11 | ELECT 1MF | 20% | 50V |
| C615 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C616 | 1-163-109-00 | CERAMIC CHIP 47PF | 5% | 50V |
| C617 | 1-163-109-00 | CERAMIC CHIP 47PF | 5% | 50V |
| C618 | 1-163-109-00 | CERAMIC CHIP 47PF | 5% | 50V |
| C619 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C620 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C621 | 1-126-176-11 | ELECT 220MF | 20% | 6.3V |
| C623 | 1-163-109-00 | CERAMIC CHIP 47PF | 5% | 50V |
| C624 | 1-163-109-00 | CERAMIC CHIP 47PF | 5% | 50V |
| C625 | 1-163-109-00 | CERAMIC CHIP 47PF | 5% | 50V |
| C626 | 1-163-109-00 | CERAMIC CHIP 47PF | 5% | 50V |
| C627 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C628 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C629 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C630 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C631 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C632 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C633 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C634 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C635 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C636 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C638 | 1-163-010-11 | CERAMIC CHIP 0.0012MF | 10% | 50V |
| C640 | 1-163-010-11 | CERAMIC CHIP 0.0012MF | 10% | 50V |
| C641 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C642 | 1-123-875-11 | ELECT 10MF | 20% | 50V |
| C643 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C644 | 1-162-587-11 | CERAMIC CHIP 0.039MF | 10% | 25V |
| C645 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V |
| C646 | 1-163-088-00 | CERAMIC CHIP 5PF | 0.25PF | 50V |
| C647 | 1-163-017-00 | CERAMIC CHIP 0.0047MF | 10% | 50V |
| C648 | 1-124-446-11 | ELECT 47MF | 20% | 10V |
| C649 | 1-124-925-11 | ELECT 2.2MF | 20% | 50V |
| C650 | 1-163-020-00 | CERAMIC CHIP 0.0082MF | 10% | 50V |
| C651 | 1-163-007-11 | CERAMIC CHIP 680PF | 10% | 50V |
| C652 | 1-131-389-91 | TANTALUM 10MF | 10% | 3.15V |
| C653 | 1-131-343-00 | TANTALUM 0.22MF | 10% | 35V |
| C654 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C655 | 1-126-233-11 | ELECT 22MF | 20% | 25V |
| C656 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C657 | 1-123-875-11 | ELECT 10MF | 20% | 50V |
| C658 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C659 | 1-162-587-11 | CERAMIC CHIP 0.039MF | 10% | 25V |
| C660 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V |
| C661 | 1-163-088-00 | CERAMIC CHIP 5PF | 0.25PF | 50V |
| C662 | 1-163-017-00 | CERAMIC CHIP 0.0047MF | 10% | 50V |
| C663 | 1-124-446-11 | ELECT 47MF | 20% | 10V |
| C664 | 1-124-925-11 | ELECT 2.2MF | 20% | 50V |
| C665 | 1-163-020-00 | CERAMIC CHIP 0.0082MF | 10% | 50V |
| C666 | 1-163-007-11 | CERAMIC CHIP 680PF | 10% | 50V |
| C667 | 1-131-389-91 | TANTALUM 10MF | 10% | 3.15V |
| C668 | 1-131-343-00 | TANTALUM 0.22MF | 10% | 35V |
| C669 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C670 | 1-126-233-11 | ELECT 22MF | 20% | 25V |
| C671 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V |
| C672 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C673 | 1-123-875-11 | ELECT 10MF | 20% | 50V |
| C674 | 1-123-875-11 | ELECT 10MF | 20% | 50V |
| C703 | 1-123-875-11 | ELECT 10MF | 20% | 50V |
| C704 | 1-126-157-11 | ELECT 10MF | 20% | 16V |
| C705 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C706 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C707 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C708 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C710 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C712 | 1-126-157-11 | ELECT 10MF | 20% | 16V |
| C713 | 1-126-157-11 | ELECT 10MF | 20% | 16V |
| C714 | 1-163-117-00 | CERAMIC CHIP 100PF | 5% | 50V |
| C715 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C716 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C717 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C731 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C734 | 1-163-017-00 | CERAMIC CHIP 0.0047MF | 10% | 50V |
| C735 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C736 | 1-124-443-00 | ELECT 100MF | 20% | 6.3V |
| C737 | 1-164-232-11 | CERAMIC CHIP 0.01MF | 10% | 50V |
| C739 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C740 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C741 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C742 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C743 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C744 | 1-163-093-00 | CERAMIC CHIP 10PF | 5% | 50V |
| C745 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |
| C746 | 1-163-109-00 | CERAMIC CHIP 47PF | 5% | 50V |
| C747 | 1-163-115-00 | CERAMIC CHIP 82PF | 5% | 50V |
| C748 | 1-163-035-00 | CERAMIC CHIP 0.047MF | | 50V |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C749 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C750 | 1-126-177-11 | ELECT | 100MF | 20% | 6.3V |
| C752 | 1-126-157-11 | ELECT | 10MF | 20% | 16V |
| C755 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C756 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C757 | 1-124-499-11 | ELECT | 1MF | 20% | 50V |
| C758 | 1-163-141-00 | CERAMIC CHIP | 0.001MF | 5% | 50V |
| C759 | 1-163-093-00 | CERAMIC CHIP | 10PF | 5% | 50V |
| C760 | 1-163-091-00 | CERAMIC CHIP | 8PF | 0.25PF | 50V |
| C761 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C762 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C763 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C764 | 1-164-004-11 | CERAMIC CHIP | 0.1MF | 10% | 25V |
| C765 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C766 | 1-163-137-00 | CERAMIC CHIP | 680PF | 5% | 50V |
| C767 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C768 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C769 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C771 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C772 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C773 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C775 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C801 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C802 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C803 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C804 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C805 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C806 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C807 | 1-163-137-00 | CERAMIC CHIP | 680PF | 5% | 50V |
| C808 | 1-124-902-71 | ELECT | 0.47MF | 20% | 50V |
| C809 | 1-163-011-11 | CERAMIC CHIP | 0.0015MF | 10% | 50V |
| C810 | 1-163-016-00 | CERAMIC CHIP | 0.0039MF | 10% | 50V |
| C811 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C812 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V |
| C813 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C814 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C815 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C816 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C817 | 1-163-088-00 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C819 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C821 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C822 | 1-163-088-00 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C823 | 1-163-017-00 | CERAMIC CHIP | 0.0047MF | 10% | 50V |
| C824 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C825 | 1-162-587-11 | CERAMIC CHIP | 0.039MF | 10% | 25V |
| C826 | 1-163-137-00 | CERAMIC CHIP | 680PF | 5% | 50V |
| C827 | 1-163-020-00 | CERAMIC CHIP | 0.0082MF | 10% | 50V |
| C828 | 1-131-343-00 | TANTALUM | 0.22MF | 10% | 35V |
| C829 | 1-131-389-91 | TANTALUM | 10MF | 10% | 3.15V |
| C830 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C831 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C832 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C833 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |

| Ref.No | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C834 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C836 | 1-163-123-00 | CERAMIC CHIP | 180PF | 5% | 50V |
| C837 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V |
| C838 | 1-163-011-11 | CERAMIC CHIP | 0.0015MF | 10% | 50V |
| C840 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C841 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C850 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C851 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C852 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C854 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C855 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C856 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C857 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C858 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C859 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C860 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C861 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C862 | 1-124-446-11 | ELECT | 47MF | 20% | 10V |
| C865 | 1-163-011-11 | CERAMIC CHIP | 0.0015MF | 10% | 50V |
| C866 | 1-163-011-11 | CERAMIC CHIP | 0.0015MF | 10% | 50V |
| C867 | 1-163-016-00 | CERAMIC CHIP | 0.0039MF | 10% | 50V |
| C868 | 1-163-016-00 | CERAMIC CHIP | 0.0039MF | 10% | 50V |
| C869 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C870 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C871 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C880 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C901 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C902 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C903 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C904 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C905 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C906 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C907 | 1-163-137-00 | CERAMIC CHIP | 680PF | 5% | 50V |
| C908 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C909 | 1-163-011-11 | CERAMIC CHIP | 0.0015MF | 10% | 50V |
| C910 | 1-163-016-00 | CERAMIC CHIP | 0.0039MF | 10% | 50V |
| C911 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C912 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V |
| C913 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C914 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C915 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C916 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C917 | 1-163-088-00 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C919 | 1-163-005-11 | CERAMIC CHIP | 470PF | 10% | 50V |
| C921 | 1-124-791-11 | ELECT | 1MF | 20% | 50V |
| C922 | 1-163-088-00 | CERAMIC CHIP | 5PF | 0.25PF | 50V |
| C923 | 1-163-017-00 | CERAMIC CHIP | 0.0047MF | 10% | 50V |
| C924 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C925 | 1-162-587-11 | CERAMIC CHIP | 0.039MF | 10% | 25V |
| C926 | 1-163-137-00 | CERAMIC CHIP | 680PF | 5% | 50V |
| C927 | 1-163-020-00 | CERAMIC CHIP | 0.0082MF | 10% | 50V |
| C928 | 1-131-343-00 | TANTALUM | 0.22MF | 10% | 35V |
| C929 | 1-131-389-91 | TANTALUM | 10MF | 10% | 3.15V |

When indicating parts by reference number, please include the board name.

# PC-39

| Ref.No | Part No. | Description | | | Remark |
|---|---|---|---|---|---|
| C930 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C931 | 1-126-233-11 | ELECT | 22MF | 20% | 25V |
| C932 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C933 | 1-163-035-00 | CERAMIC CHIP | 0.047MF | | 50V |
| C934 | 1-124-443-00 | ELECT | 100MF | 20% | 6.3V |
| C936 | 1-163-123-00 | CERAMIC CHIP | 180PF | 5% | 50V |
| C937 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V |
| C938 | 1-163-011-11 | CERAMIC CHIP | 0.0015MF | 10% | 50V |
| C940 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C941 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C951 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C952 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C953 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C954 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C955 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C956 | 1-163-109-00 | CERAMIC CHIP | 47PF | 5% | 50V |
| C957 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |

### CONNECTOR

| | | |
|---|---|---|
| CN601 | 1-568-084-11 | CONNECTOR (RECEPTALE) 30P |
| CN602 | 1-568-084-11 | CONNECTOR (RECEPTALE) 30P |
| CN603 | 1-506-477-11 | PIN, CONNECTOR 12P |
| CN604 | 1-506-470-11 | PIN, CONNECTOR 5P |
| CN605 | 1-506-471-11 | PIN, CONNECTOR 6P |
| CN606 | 1-506-468-11 | PIN, CONNECTOR 3P |
| CN701 | 1-506-468-11 | PIN, CONNECTOR 3P |

### TRIMMER

| | | |
|---|---|---|
| CV701 | 1-141-227-00 | CAP, CERAMIC TRIMMER |

### DIODE

| | | |
|---|---|---|
| D401 | 8-719-400-18 | DIODE MA152WK |
| D501 | 8-719-104-34 | DIODE 1S2836 |
| D502 | 8-719-400-18 | DIODE MA152WK |
| D503 | 8-719-800-76 | DIODE 1SS226 |
| D610 | 8-719-104-34 | DIODE 1S2836 |
| D701 | 8-719-400-18 | DIODE MA152WK |
| D702 | 8-719-400-18 | DIODE MA152WK |
| D703 | 8-713-300-88 | DIODE 1T33C-01 |
| D850 | 8-719-104-34 | DIODE 1S2836 |
| D851 | 8-719-800-76 | DIODE 1SS226 |
| D852 | 8-719-800-76 | DIODE 1SS226 |

### FILTER

| | | |
|---|---|---|
| FL601 | 1-235-565-21 | FILTER, LOW PASS |
| FL602 | 1-235-565-21 | FILTER, LOW PASS |
| FL801 | 1-236-551-11 | BPF |
| FL901 | 1-236-550-11 | BPF |

### IC

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| IC401 | 8-752-334-42 | IC CXD2106Q | |
| IC501 | 8-759-100-93 | IC UPC393G2 | |
| IC602 | 8-759-111-56 | IC UPC4572G2 | |
| IC603 | 8-759-009-07 | IC MC14053BF | |
| IC604 | 8-759-111-56 | IC UPC4572G2 | |
| IC605 | 8-759-009-06 | IC MC14052BF | |
| IC606 | 8-759-111-56 | IC UPC4572G2 | |
| IC607 | 8-759-111-56 | IC UPC4572G2 | |
| IC608 | 8-759-009-07 | IC MC14053BF | |
| IC609 | 8-759-009-07 | IC MC14053BF | |
| IC610 | 8-759-009-06 | IC MC14052BF | |
| IC611 | 8-759-009-06 | IC MC14052BF | |
| IC612 | 8-759-009-07 | IC MC14053BF | |
| IC613 | 8-759-111-56 | IC UPC4572G2 | |
| IC614 | 8-752-009-90 | IC CX20099 | |
| IC615 | 8-759-009-06 | IC MC14052BF | |
| IC701 | 8-752-322-57 | IC CXD1077M | |
| IC703 | 8-752-332-46 | IC CXD1208Q | |
| IC704 | 8-759-009-51 | IC MC14538BF | |
| IC705 | 8-759-945-09 | IC MB8464-12LLPF | |
| IC705 | 8-759-979-96 | IC MB8464A-15LLPF | |
| IC707 | 8-759-990-94 | IC MB606199 | |
| IC708 | 8-752-010-20 | IC CX20102 | |
| IC709 | 8-759-908-15 | IC TL431CLP | |
| IC801 | 8-752-033-01 | IC CXA1237AR | |
| IC850 | 8-759-111-56 | IC UPC4572G2 | |
| IC901 | 8-752-033-01 | IC CXA1237AR | |
| IC902 | 8-759-009-06 | IC MC14052BF | |
| IC903 | 8-759-009-06 | IC MC14052BF | |
| IC904 | 8-759-111-56 | IC UPC4572G2 | |
| IC905 | 8-759-111-56 | IC UPC4572G2 | |
| IC906 | 8-759-111-56 | IC UPC4572G2 | |

### COIL

| | | | |
|---|---|---|---|
| L401 | 1-407-169-XX | INDUCTOR | 100UH |
| L501 | 1-408-978-21 | INDUCTOR | 47UH |
| L702 | 1-408-970-21 | INDUCTOR | 10UH |
| L704 | 1-407-169-XX | INDUCTOR | 100UH |
| L705 | 1-407-169-XX | INDUCTOR | 100UH |
| L706 | 1-408-970-21 | INDUCTOR | 10UH |
| L707 | 1-408-970-21 | INDUCTOR | 10UH |
| L801 | 1-407-169-XX | INDUCTOR | 100UH |
| L802 | 1-408-948-00 | INDUCTOR | 220UH |
| L901 | 1-407-169-XX | INDUCTOR | 100UH |
| L902 | 1-408-948-00 | INDUCTOR | 220UH |

### TRANSISTOR

| | | |
|---|---|---|
| Q501 | 8-729-100-66 | TRANSISTOR 2SC1623 |
| Q502 | 8-729-901-01 | TRANSISTOR DTC144EK |
| Q503 | 8-729-100-66 | TRANSISTOR 2SC1623 |
| Q504 | 8-729-902-XX | TRANSISTOR DTC114TK |
| Q505 | 8-729-901-01 | TRANSISTOR DTC144EK |
| Q506 | 8-729-216-22 | TRANSISTOR 2SA1162 |
| Q508 | 8-729-100-66 | TRANSISTOR 2SC1623 |
| Q509 | 8-729-903-10 | TRANSISTOR FMW1 |

When indicating parts by reference number, please include the board name.

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| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| Q510 | 8-729-100-66 | TRANSISTOR 2SC1623 (AEP MODEL) | |
| Q511 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q512 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q513 | 8-729-100-66 | TRANSISTOR 2SC1623 (AEP MODEL) | |
| Q514 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q515 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q516 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q517 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q518 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q520 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q521 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q522 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q523 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q524 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q526 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q601 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q602 | 8-729-116-05 | TRANSISTOR 2SK160-K5 | |
| Q603 | 8-729-116-05 | TRANSISTOR 2SK160-K5 | |
| Q604 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q605 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q606 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q607 | 8-729-216-22 | TRANSISTOR 2SA1162 | |
| Q610 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q611 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q701 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q702 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q703 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q705 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q706 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q707 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q708 | 8-729-901-06 | TRANSISTOR DTA144EK | |
| Q709 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q720 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q721 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q801 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q802 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q840 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q851 | 8-729-902-96 | TRANSISTOR FMS1 | |
| Q852 | 8-729-904-04 | TRANSISTOR FMS2 | |
| Q853 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q854 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q855 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q856 | 8-729-100-66 | TRANSISTOR 2SC1623 | |
| Q901 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q902 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q940 | 8-729-100-66 | TRANSISTOR 2SC1623 | |

### RESISTOR

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R150 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R151 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R152 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R153 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R154 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R155 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R401 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R402 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R403 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R404 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R405 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R406 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R407 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R408 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R409 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R412 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R413 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R501 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R502 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R503 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R504 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R505 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R506 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R507 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R508 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R509 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R510 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R511 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R512 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R513 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R514 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R515 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R516 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R517 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R519 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R520 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R521 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R522 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R523 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R524 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R526 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R527 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R529 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R530 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R531 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R532 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R533 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R534 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R535 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R536 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R537 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R538 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R539 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R540 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R542 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R543 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R544 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R545 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |

When indicating parts by reference number, please include the board name.

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| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R546 | 1-216-062-00 | METAL GLAZE | 3.6K | 5% | 1/10W | |
| R547 | 1-216-748-11 | METAL GLAZE | 39K | 5% | 1/10W | |
| R548 | 1-216-062-00 | METAL GLAZE | 3.6K | 5% | 1/10W | |
| R549 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R550 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R551 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R553 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R555 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R571 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R580 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R581 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R582 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R583 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R584 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W | |
| R585 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R586 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R587 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R588 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R607 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R608 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W | |
| R609 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W | |
| R610 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R611 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W | |
| R612 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W | |
| R613 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R614 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R616 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R617 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R618 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R619 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R621 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R622 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R623 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R624 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R625 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R626 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R627 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R628 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R629 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R630 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R631 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R632 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R633 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R634 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R635 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R636 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R637 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R638 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R639 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R640 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R641 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R642 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R643 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R644 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R645 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R646 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R647 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R648 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R649 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R650 | 1-216-748-11 | METAL GLAZE | 39K | 5% | 1/10W | |
| R651 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R653 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R654 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R655 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R659 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R660 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R661 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R662 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R663 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R664 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R665 | 1-216-009-00 | METAL GLAZE | 22 | 5% | 1/10W | |
| R666 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R667 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R668 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R669 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R670 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R671 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R672 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R673 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R674 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R675 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R676 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R677 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R678 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R679 | 1-216-009-00 | METAL GLAZE | 22 | 5% | 1/10W | |
| R680 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R681 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R682 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R683 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R684 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R685 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R686 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R687 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R688 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R689 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R690 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R691 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R693 | 1-216-001-00 | METAL GLAZE | 10 | 5% | 1/10W | |
| R695 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R696 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R697 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R698 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R701 | 1-216-029-00 | METAL GLAZE | 150 | 5% | 1/10W | |
| R702 | 1-216-653-11 | METAL CHIP | 1.2K | 0.50% | 1/10W | |
| R703 | 1-216-661-11 | METAL CHIP | 2.7K | 0.50% | 1/10W | |
| R704 | 1-216-022-00 | METAL GLAZE | 75 | 5% | 1/10W | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R705 | 1-216-039-00 | METAL GLAZE | 390 | 5% | 1/10W | |
| R706 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R707 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R708 | 1-216-748-11 | METAL GLAZE | 39K | 5% | 1/10W | |
| R712 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R713 | 1-216-748-11 | METAL GLAZE | 39K | 5% | 1/10W | |
| R717 | 1-216-117-00 | METAL GLAZE | 680K | 5% | 1/10W | |
| R718 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W | |
| R720 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R721 | 1-216-101-00 | METAL GLAZE | 150K | 5% | 1/10W | |
| R723 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R724 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R726 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R727 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R729 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R732 | 1-216-677-11 | METAL CHIP | 12K | 0.50% | 1/10W | |
| R738 | 1-216-017-00 | METAL GLAZE | 47 | 5% | 1/10W | |
| R739 | 1-216-645-11 | METAL CHIP | 560 | 0.50% | 1/10W | |
| R740 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R741 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R742 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R743 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R744 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R745 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R746 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R748 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R749 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R750 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R751 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R752 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R753 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R754 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R755 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R756 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R757 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W | |
| R758 | 1-216-029-00 | METAL GLAZE | 150 | 5% | 1/10W | |
| R759 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R760 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R761 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R762 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R763 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R764 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R768 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W | |
| R769 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W | |
| R771 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W | |
| R772 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R774 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R775 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R776 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R777 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R780 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R781 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R782 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R783 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R784 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R785 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R787 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R788 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R789 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W | |
| R790 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R791 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R792 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R793 | 1-216-001-00 | METAL GLAZE | 10 | 5% | 1/10W | |
| R794 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R795 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R797 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R798 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R799 | 1-216-029-00 | METAL GLAZE | 150 | 5% | 1/10W | |
| R801 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R802 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R803 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R804 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R805 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R806 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R807 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R808 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R809 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R810 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R811 | 1-216-107-00 | METAL GLAZE | 270K | 5% | 1/10W | |
| R812 | 1-216-046-00 | METAL GLAZE | 750 | 5% | 1/10W | |
| R813 | 1-216-046-00 | METAL GLAZE | 750 | 5% | 1/10W | |
| R814 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R815 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R816 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R817 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R818 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R819 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R820 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R821 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R822 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R823 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R824 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R827 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R828 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R829 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R830 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R831 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W | |
| R833 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R840 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R841 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W | |
| R842 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R850 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R851 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R852 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R853 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R854 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |

When indicating parts by reference number, please include the board name.

# PC-39

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R855 | 1-216-043-00 | METAL GLAZE | 560 | 5% | 1/10W | |
| R856 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R857 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R858 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R859 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R860 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R861 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R862 | 1-216-109-00 | METAL GLAZE | 330K | 5% | 1/10W | |
| R863 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R864 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R865 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R866 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R867 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R868 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R869 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R870 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R871 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R872 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R873 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R874 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R875 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R876 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R877 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R878 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R879 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R880 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R881 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R885 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R886 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R901 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R902 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R903 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R904 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R905 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R906 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R907 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R908 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R909 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R910 | 1-216-121-00 | METAL GLAZE | 1M | 5% | 1/10W | |
| R911 | 1-216-107-00 | METAL GLAZE | 270K | 5% | 1/10W | |
| R912 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R913 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R915 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R916 | 1-216-063-00 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R917 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W | |
| R918 | 1-216-045-00 | METAL GLAZE | 680 | 5% | 1/10W | |
| R919 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R920 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R921 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R922 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R923 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R924 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R927 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R928 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R929 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R930 | 1-216-083-00 | METAL GLAZE | 27K | 5% | 1/10W | |
| R931 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R933 | 1-216-047-00 | METAL GLAZE | 820 | 5% | 1/10W | |
| R940 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R941 | 1-216-105-00 | METAL GLAZE | 220K | 5% | 1/10W | |
| R942 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R952 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R953 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R954 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R955 | 1-216-079-00 | METAL GLAZE | 18K | 5% | 1/10W | |
| R956 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R957 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R958 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R959 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R960 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R961 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R962 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R963 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R964 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R965 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R966 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R967 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R968 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R969 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R970 | 1-216-085-00 | METAL GLAZE | 33K | 5% | 1/10W | |
| R971 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R972 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R973 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R984 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |

### VARIABLE RESISTOR

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| RV701 | 1-228-995-00 | RES, ADJ, CARBON 22K | |
| RV702 | 1-228-995-00 | RES, ADJ, CARBON 22K | |
| RV703 | 1-228-999-00 | RES, ADJ, CARBON 470K | |
| RV705 | 1-228-999-00 | RES, ADJ, CARBON 470K | |
| RV707 | 1-228-991-00 | RES, ADJ, CARBON 2.2K | |
| RV708 | 1-228-997-00 | RES, ADJ, CARBON 100K | |
| RV709 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV801 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV802 | 1-228-996-00 | RES, ADJ, CARBON 47K | |
| RV901 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV902 | 1-228-995-00 | RES, ADJ, CARBON 22K | |
| RV951 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV952 | 1-228-995-00 | RES, ADJ, CARBON 22K | |
| RV953 | 1-228-994-00 | RES, ADJ, CARBON 10K | |
| RV954 | 1-228-995-00 | RES, ADJ, CARBON 22K | |

### CRYSTAL

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| X401 | 1-567-504-11 | OSCILLATOR, CRYSTAL (4.43MHz) | |

When indicating parts by reference number, please include the board name.

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| | *1-633-519-11 | UC-4 BOARD<br>*********** | |
| | | CONNECTOR | |
| CN101 | 1-566-529-11 | CONNECTOR, FPC (ZIF) 13P | |
| CN102 | 1-566-527-21 | CONNECTOR, FPC (ZIF) 11P | |
| CN103 | 1-566-530-21 | CONNECTOR, FPC (ZIF) 14P | |
| CN103 | 1-575-392-11 | CABLE, FLAT (1.0MM PITCH) 14P | |
| | | DIODE | |
| D101 | 8-719-104-34 | DIODE 1S2836 | |
| D102 | 8-719-104-34 | DIODE 1S2836 | |
| D103 | 8-719-104-34 | DIODE 1S2836 | |
| D104 | 8-719-104-34 | DIODE 1S2836 | |

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| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| | *1-633-518-11 | CC-26 BOARD<br>************ | |
| | | CONNECOTR | |
| CN301 | *1-562-880-21 | CONNECOTR, CARD EDGE 15P | |
| | | CONNECOTR | |
| W301 | 1-575-393-11 | CABLE, FLAT (1.0MM PITCH) 15P | |

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| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| | 1-633-660-11 | FP-237 FLEXIBLE BOARD<br>********************** | |
| | 3-728-869-02 | HOLDER, SENSOR | |
| | | DIODE | |
| D301 | 8-719-820-44 | PHOTO COUPLER TLP907-0 | |
| | | TRANSISTOR | |
| Q301 | 8-729-906-48 | EE-TP109 | |
| | | SWITCH | |
| S301 | 1-572-173-11 | SWITCH, SLIDE (ENCODER) MODE | |
| S303 | 1-570-869-21 | SWITCH, PUSH (2 KEY) THICKNESS | |
| S901 | 1-571-099-11 | SWITCH (CASSETE DOWN) | |

*************************************************************

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| | 1-628-061-12 | FP-90 FLEXIBLE BOARD<br>********************* | |
| | 3-728-837-01 | HOLDER, LED | |
| | 3-728-869-02 | HOLDER, SENSOR | |
| | | DIODE | |
| D302 | 8-719-940-81 | DIODE GL452S | |
| D303 | 8-719-820-44 | PHOTO COUPLER TLP907-0 | |
| | | TRANSISTOR | |
| Q302 | 8-729-906-48 | EE-TP109 | |
| | | SWITCH | |
| S302 | 1-572-298-21 | SWITCH, PUSH(3 KEY)REC PROOF TAPE SELECT | |

*************************************************************

| Ref.No | Part No. | Description | Remark |
|---|---|---|---|
| | *A-7061-899-A | NM-2 (A) BOARD, COMPLETE (UK MODEL)<br>*********************** | |
| | | CAPACITOR | |
| C001 | 1-163-035-00 | CERAMIC CHIP 0.047MF | 50V |
| C002 | 1-135-153-21 | TANTAL CHIP 2.2MF 10% | 25V |
| C003 | 1-163-035-00 | CERAMIC CHIP 0.047MF | 50V |
| C004 | 1-135-153-21 | TANTAL CHIP 2.2MF 10% | 25V |
| C005 | 1-135-155-21 | TANTAL CHIP 4.7MF 10% | 16V |
| C006 | 1-135-155-21 | TANTAL CHIP 4.7MF 10% | 16V |
| C007 | 1-135-153-21 | TANTAL CHIP 2.2MF 10% | 25V |
| C008 | 1-135-153-21 | TANTAL CHIP 2.2MF 10% | 25V |
| C011 | 1-135-153-21 | TANTAL CHIP 2.2MF 10% | 25V |
| C012 | 1-135-153-21 | TANTAL CHIP 2.2MF 10% | 25V |
| | | CONNECOTR | |
| CN001 | 1-506-469-11 | PIN, CONNECTOR 4P | |
| CN002 | 1-506-477-11 | PIN, CONNECTOR 12P | |
| | | DIODE | |
| D001 | 8-719-800-76 | DIODE 1SS126 | |
| D002 | 8-719-400-18 | DIODE MA152WK | |
| D003 | 8-719-104-34 | DIODE 1S2836 | |
| | | IC | |
| IC001 | 8-759-009-07 | IC MC14053BF | |
| | | JUMPER RESISTOR | |
| JR001 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR002 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR003 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR004 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR005 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR006 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR007 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR008 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR009 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR010 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR011 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR012 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR013 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR014 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR015 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |
| JR016 | 1-216-296-00 | METAL GLAZE 0 5% 1/8W | |

When indicating parts by reference number, please include the board name.

# NM-2

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| JR017 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR018 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR019 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR020 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR021 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR022 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR023 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR024 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR025 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR026 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR027 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR028 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR029 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR030 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR031 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR032 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR033 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR034 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR035 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR036 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR037 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR038 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR039 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR040 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR041 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR042 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR043 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR044 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR045 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR046 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR047 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| JR048 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |

## COIL

| | | | |
|---|---|---|---|
| L001 | 1-408-408-00 | INDUCTOR | 8.2UH |
| L002 | ⚠1-408-408-00 | INDUCTOR | 8.2UH |

## CASE BLOCK

| | | |
|---|---|---|
| NM001 | *A-6771-194-A | CASE BLOCK ASSY, NA |

## TRANSISTOR

| | | |
|---|---|---|
| Q003 | 8-729-901-01 | TRANSISTOR DTC144EK |
| Q004 | 8-729-901-01 | TRANSISTOR DTC144EK |
| Q005 | 8-729-901-01 | TRANSISTOR DTC144EK |
| Q006 | 8-729-901-01 | TRANSISTOR DTC144EK |
| Q007 | 8-729-901-01 | TRANSISTOR DTC144EK |
| Q008 | 8-729-901-01 | TRANSISTOR DTC144EK |
| Q009 | 8-729-901-01 | TRANSISTOR DTC144EK |
| Q010 | 8-729-901-01 | TRANSISTOR DTC144EK |

## RESISTOR

| Ref.No | Part No. | Description | | | | Remark |
|---|---|---|---|---|---|---|
| R001 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R002 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R003 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R004 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R006 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R007 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R008 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R009 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R010 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R011 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R012 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R013 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| R014 | 1-216-296-00 | METAL GLAZE | 0 | 5% | 1/8W | |
| R015 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R016 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R019 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R021 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R022 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R023 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R025 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R027 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R028 | 1-216-071-00 | METAL GLAZE | 8.2K | 5% | 1/10W | |
| R029 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |

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## MISCELLANEOUS

*************

| | | |
|---|---|---|
| | A-7049-293-A | DRUM ASSY, ROTARY UPPER (DGU-58A) |
| | ⚠1-466-199-11 | MODULATOR, RF (RFU-2010) (AEP MODEL) |
| | 1-466-206-11 | MODULATOR, RF (RFU-2011) (UK MODEL) |
| | ⚠1-540-054-11 | INLET, AC |
| | 1-575-387-11 | CABLE, FLAT (1.0MM PITCH) 12P |
| | 1-575-390-11 | CABLE, FLAT (1.0MM PITCH) 18P |
| | 1-575-391-11 | CABLE, FLAT (1.0MM PITCH) 5P |
| | 1-575-456-11 | WIRE, FLAT TYPE (20 CORE) |
| M901 | X-3731-108-1 | MOTOR ASSY |
| M902 | 8-835-331-01 | MOTOR, DC U-22A |
| M903 | A-7040-160-A | MOTOR ASSY, THREADING |
| M906 | A-7048-339-A | DRUM ASSY (DGU-58A-R) |

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When indicating parts by reference number, please include the board name.

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

## ACCESSORIES AND PACKING MATERIALS

| Part No. | Description | Remark |
|---|---|---|
| A-6768-153-A | COMMANDER ASSY (RMT-451) | |
| 1-551-086-31 | CORD, CONNECTION | |
| 1-551-513-00 | CORD ASSY, COAXIAL | |
| 1-551-734-11 | CORD, CONNECTION (RK-74H) | |
| ⚠.1-558-032-11 | CORD, POWER (UK MODEL) | |
| 1-559-533-11 | CORD, CONNECTION | |
| 1-574-056-11 | CORD, POWER (AEP MODEL) | |
| 1-574-316-11 | CORD, CONNECTION | |
| *1-575-335-21 | CORD, CONNECTION | |
| *3-677-503-00 | SHEET, PROTECTION | |
| *3-742-569-01 | INDIVIDUAL CARTON | |
| *3-742-570-01 | CASE, UPPER | |
| *3-742-571-01 | CUSHION (LOWER) | |
| *3-742-572-02 | CUSHION (UPPER) | |
| 3-751-158-41 | MANUAL, INSTRUCTION (English) | |
| 3-751-158-51 | MANUAL, INSTRUCTION (AEP MODEL) (French, Germans, Spanish) | |
| 3-751-158-61 | MANUAL, INSTRUCTION (AEP MODEL) (Dutch, Swedish, Italian) | |
| 8-883-112-29 | V8 6CLHSP | |

* * *

## HARDWARE LIST

### STOP RING

| | |
|---|---|
| 7-624-105-04 | STOP RING 2.3, TYPE -E |

### PRECISION SCREW

| | |
|---|---|
| 7-627-555-88 | PRECISION SCREW +P 1.4X1.8 |
| 7-627-553-37 | PRECISION SCREW +P 2X3 TYPE 3 |
| 7-627-553-47 | PRECISION SCREW +P 2X4 TYPE 3 |

### SCREW

| | |
|---|---|
| 7-621-772-30 | SCREW +B 2X6 |
| 7-685-103-19 | SCREW +P 2X5 TYPE2 NON-SLIT |
| 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 IT-3 |

* * *

When indicating parts by reference number, please include the board name.

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

# SECTION 8
# MECHANICAL ADJUSTMENTS

**For mechanical adjustments, refer to the separate "8mm Video Mechanical Adjustments Ⅲ (U mechanism)"**

### 8-1. Tape pass adjustment

**[Track shift]**

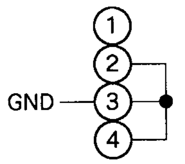
Based on four types of pilot signals, the 8mm video system controls the tape transport speed instantaneously and uses ATF (Automatic Track Finding) to attain high-precision tracking. This makes a tracking adjustment control knob unnecessary. Accurate tracing has also been realized.

However, the ATF system has caused a problem in adjusting the tape pass system. The tape pass cannot be adjusted completely because the ATF automatically compensates even if the head's tracing fluctuates slightly.

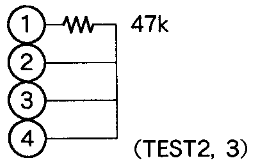
Therefore, to do fine tracking adjustment, first switch to the track shift mode. Since the ATF is forced to operate and the tracking amount (approx. ¼) shifts to a constant amount, fine tracking adjustment can be easily done. A track shift jig is unnecessary.

#### 8-1-1. Setting the track shift mode

1) Ⓐ With the front panel assembly:
   Connect Pins ②, ③, and ④ of CN503.



Ⓑ Without the front panel assembly:
First connect 47 kΩ resister to Pin ① of CN503 and to Pins ②, ③ and ④ of CN503.

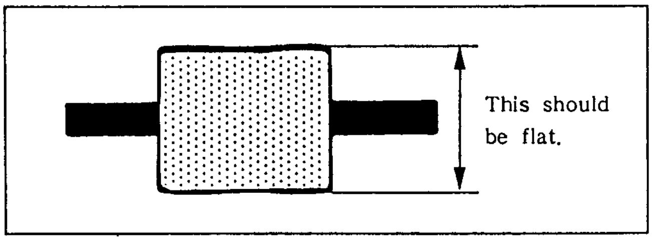


2) Switch to the test mode.

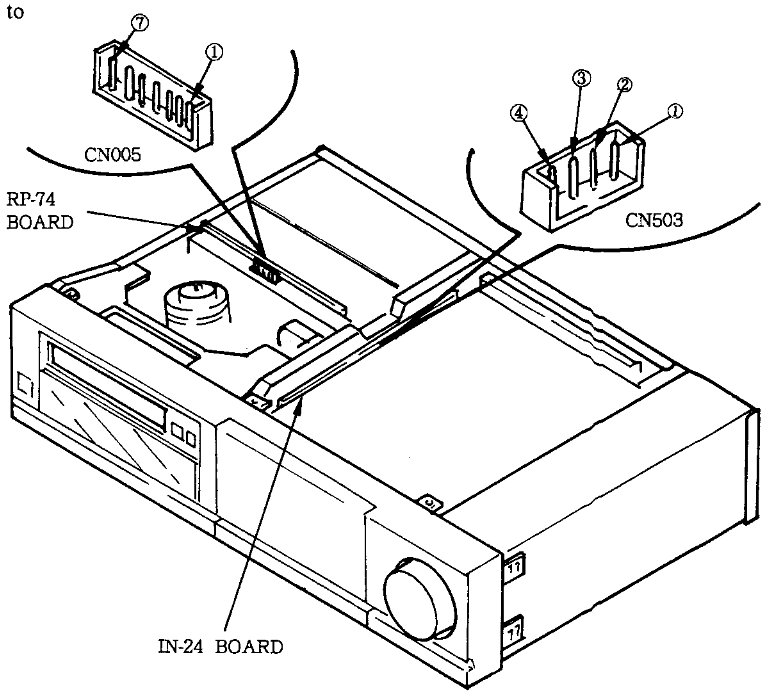
**Note:** It is possible to select SP/LP manually in the test mode.
When the set becomes to LP mode, select SP mode by SP/LP switch.

#### 8-1-2. Preparation for adjustment

1) Clean the tape transport surfaces (tape guide, drum, capstan, and pinch roller).
2) Connection to an oscilloscope and waveform output.
   1ch : The drum head's RF signal output CN005 pin ⑦ (PB RF OUT)
   Output method: Connect the external trigger output CN005 pin ② (RF SW. P) to CN005 pin ① (GND).
3) Playback the tracking alignment tape (WR-IN) (J-5).
4) Check if the entry and exit sides of the oscilloscope's RF waveform are flat.
   If they are not flat, make the adjustment by following the separately published U mechanical series mechanical adjustment manual.



5) After the adjustment is Remove the from the IN -24 board's CN503.



# SECTION 9
# ELECTRICAL ADJUSTMENTS

**During adjustment, refer to the relevant parts arrangement diagrams beginning on Page 279.**

The following measuring equipment is used for electrical adjustments.

**[Equipment to be used]**

1) Monitor TV
2) Dual trace oscilloscope having band of over 10 MHz, incorporating delay mode. (Use 10:1 probe unless otherwise specified)
3) Frequency counter
4) Pattern generator
   (Equipped with video output terminal: refer to 8-1-1. Connection of Equipment)
5) Digital voltmeter
6) Audio generator
7) Audio level meter
8) Audio distortion meter
9) Audio attenuator
10) Audio multiplex signal generator
11) Alignment tapes
12) Vectorscope

Tracking adjustment (WR5-1CP)
Parts Code: 8-967-995-07

Video frequency response adjustment (WS5-7CE)
Parts Code: 8-967-995-18

Normal mode operation checking

| | |
|---|---|
| For SP (WR5-5CSP) | Parts Code: 8-967-995-46 |
| or (WR5-4CSP) | Parts Code: 8-967-995-47 |
| For LP (WR5-4CL) | Parts Code: 8-967-995-56 |

Hi8 mode operation checking (ME Tape)

| | |
|---|---|
| For SP (WR5-8NCE) | Parts Code: 8-967-995-48 |
| For LP (WR5-8NCE) | Parts Code: 8-967-995-57 |

AFM Stereo operation checking

| | |
|---|---|
| For SP (WRS-9CS) | Parts Code: 8-967-995-28 |

## 9-1. PREPARATIONS

### 9-1-1. Connection of Equipment

Adjustment is performed by connection of the measuring equipment shown in Fig. 8-1., according to the input terminal indications (S VIDEO or VIDEO). The input terminal is indicated by (  ) in the signal column. Either input terminal can be used when there is no indication. The S VIDEO IN terminal has priority. When adjusting using the VIDEO IN terminal input, remove the connector from the S VIDEO IN terminal.

**Notes:**
1) If adjustment is performed by VIDEO input when S VIDEO input is indicated, the product specifications for this unit may not be satisfied. Be sure to follow the indications.
2) When performing adjustment using a VCR equipped with an S video output terminal as the signal source, the performance of this unit may be affected by that VCR. Try to use a pattern generator with a Y/C separation output terminal if possible.

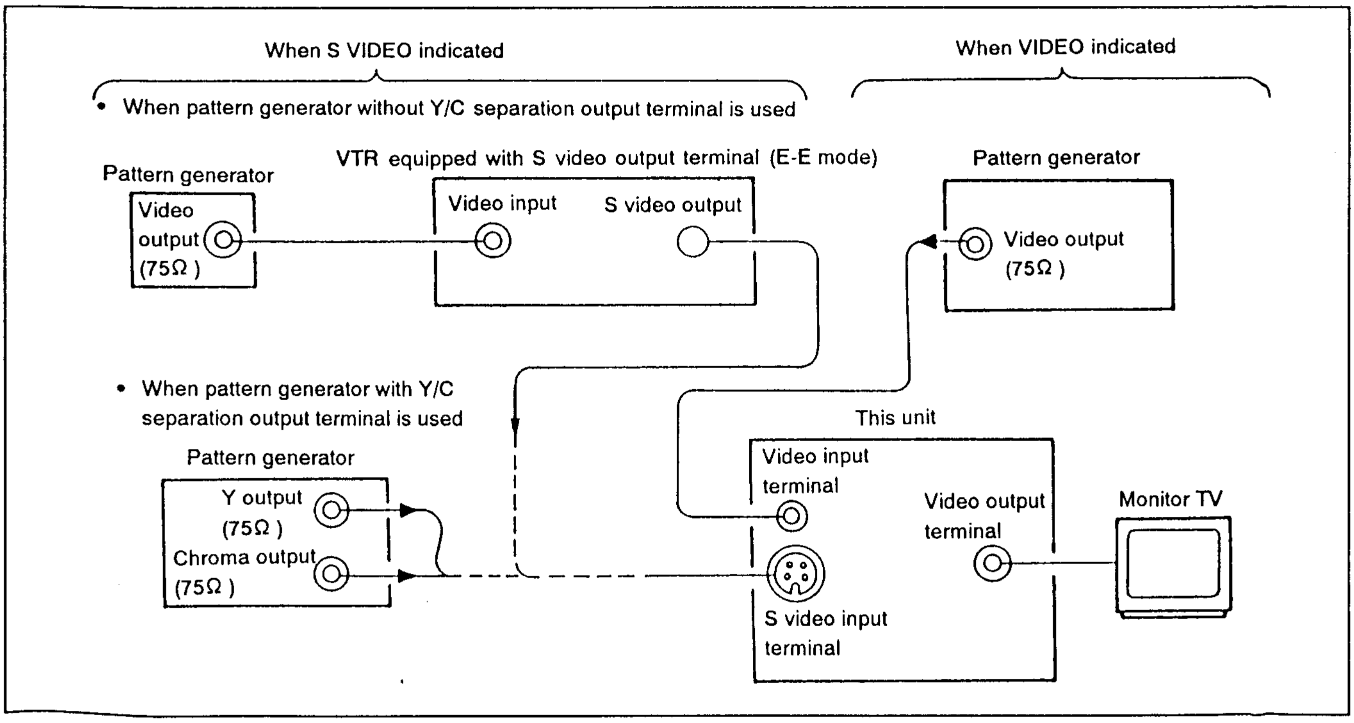

When S VIDEO indicated
• When pattern generator without Y/C separation output terminal is used
When VIDEO indicated
Pattern generator
Video output (75Ω)
VTR equipped with S video output terminal (E-E mode)
Video input
S video output
Pattern generator
Video output (75Ω)
• When pattern generator with Y/C separation output terminal is used
Pattern generator
Y output (75Ω)
Chroma output (75Ω)
This unit
Video input terminal
Video output terminal
S video input terminal
Monitor TV

Fig. 9-1.

### 9-1-2. Confirmation of Input Signal

As adjustment is made using a video signal obtained from a pattern generator as the adjustment signal, it is necessary to confirm that the video output signal is within the required specifications.

### 1. S VIDEO Input

Connect an oscilloscope to the Y signal terminal of the S video input terminal (CNJ505 on RJ-5 board) and confirm that the sync signal of the Y signal is approximately 0.3 Vp-p and the amplitude of the video section is approximately 0.7 Vp-p. (When using a VCR equipped with an S video output terminal, confirm that there is no residual chroma signal or burst signal.) Next, connect the oscilloscope to the chroma signal terminal of the S video input terminals and confirm that the burst signal amplitude of the chroma signal is approximately 0.3 Vp-p and flat, and that the amplitude ratio of the burst signal to the chroma signal is 0.30:0.66. The Y and chroma signals used for adjustment are shown in Fig. 9-2.

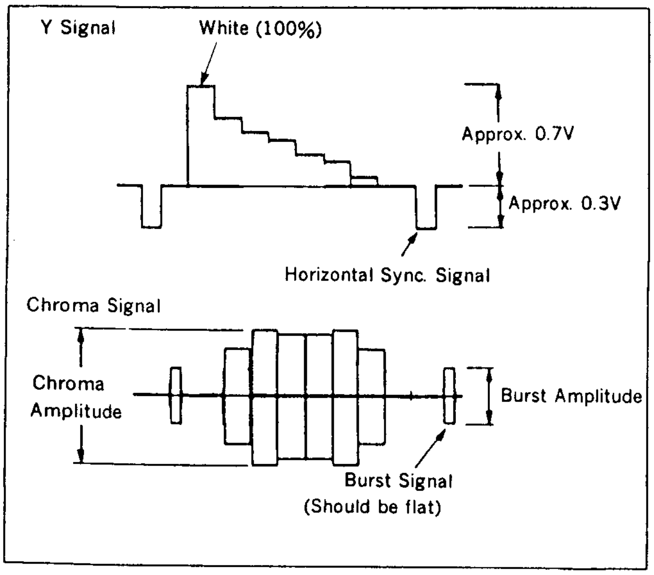

Y Signal
White (100%)
Approx. 0.7V
Approx. 0.3V
Horizontal Sync. Signal
Chroma Signal
Chroma Amplitude
Burst Amplitude
Burst Signal
(Should be flat)

Fig. 9-2. Pattern Generator Color Bar Signals

### 2. VIDEO Input

Connect an oscilloscope to the video input terminal (CNJ505 on RJ-5 board) and confirm that the amplitude of the sync signal of the video signal is approximately 0.3V and the amplitude of the video section is approximately 0.7V. Confirm that the burst signal amplitude is approximately 0.3V and flat, and that the level ratio of the burst signal and red signal is 0.30:0.66.

The video signal (color bars) used for adjustment are shown in Fig. 9-3.

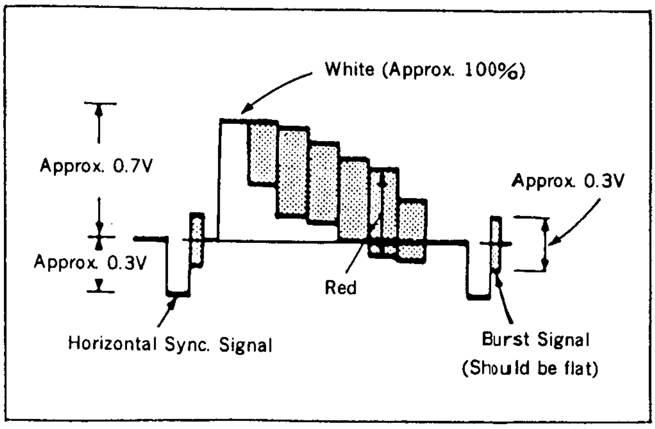

White (Approx. 100%)
Approx. 0.7V
Approx. 0.3V
Approx. 0.3V
Red
Horizontal Sync. Signal
Burst Signal
(Should be flat)

Fig. 9-3. Pattern Generator Color Bar Signal

### [Alignment tapes]

The alignment tapes shown in the table below are available. Use the tape indicated in the signal column of each adjustment section.

When a specific name is not given for use of an operation checking tape, any of the operation checking tapes can be used.

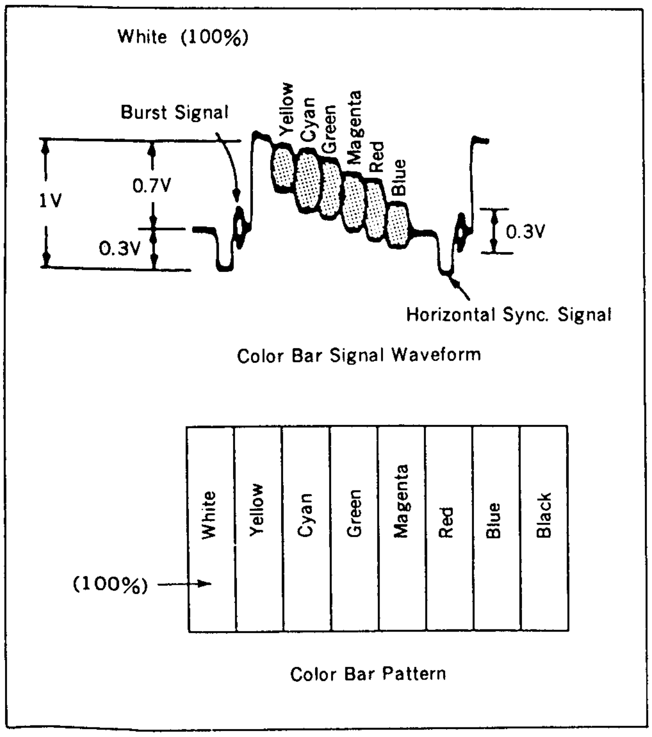
| Name | Recording Mode | Tape Type | Tape Speed | Contents | | Use |
|---|---|---|---|---|---|---|
| | | | | Video Area | PCM Area | |
| Tracking WR5-1CP | STD | MP | SP | CH2: Signal for 1 MHz tape path adjustment<br>Marker (CH1: 9 MHz) for switching position adjustment | | Tape path adjustment<br>Switching position adjustment |
| Video frequency response WR5-7CE | Hi8 | ME | SP | RF sweep 0 to 15 MHz<br>Markers 2, 4.5, 7, 8.5, 10 MHz | | Frequency response adjustment |
| Operation checking WR5-4CSP or WR5-5CSP | STD | MP | SP | • Video signals<br>Color bars 4 minites<br>Monoscope 4 minutes<br>• Audio signal (AFM)<br>400 Hz, 60% modulation | • Audio signals (PCM)<br>Monoscope section<br>20 Hz 20 seconds<br>400 Hz 20 seconds<br>14 kHz 20 seconds } Repeated four times<br>Color bar section<br>1 kHz 4 minutes | Operation checking |
| WR5-8CSE | Hi8 | ME | SP | | Audio signals (PCM)<br>400 Hz 8 minutes | |
| WR5-4CL | STD | MP | LP | • Video signals<br>Color bars 4 minites<br>Monoscope 4 minutes<br>• Audio signal (AFM)<br>400 Hz, 60% modulation | | |
| WR5-8CLE | Hi8 | ME | LP | | Audio signals (PCM)<br>400 Hz 8 minutes | |
| WR5-9CS | STD | MP | SP | • Video signals<br>Color bars 4 minites<br>Monoscope 4 minutes<br>• Audio signal (AFM)<br>Lch: 400Hz<br>L+R (1.5 MHz ± 60 kHz)<br>Rch: 1 kHz<br>L-R (1.7 MHz ± 30 kHz) | Audio signals (PCM)<br>400 Hz 8 minutes | |

**Note:** Recording modes
STD ··················Conventional mode
Hi8 ···················High band mode

Tape Types
MP ·····················Metal particle tape
ME·····················Metal evaporated tape

The 100% color bar signal recorded on the alignment tape is shown in Fig. 9-4.

**Note:** Measured at VIDEO OUT terminal (terminated at 75Ω )


White (100%)
Burst Signal
Yellow
Cyan
Green
Magenta
Red
Blue
1V
0.7V
0.3V
0.3V
Horizontal Sync. Signal
White
Yellow
Cyan
Green
Magenta
Red
Blue
Black
(100%)

Color Bar Signal Waveform

Color Bar Pattern

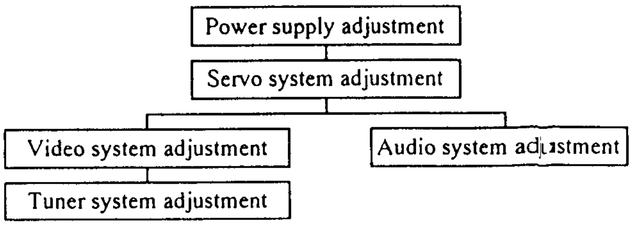
Fig. 9-4. Color bar signal on alignment tape

### [I/O level and impedance]

Video input Pin jack
Input signal: 1 Vp-p, 75Ω unbalanced, negative SYNC
Video output Pin jack
Output signal: 1 Vp-p, 75Ω unbalanced, negative SYNC
S video input (4-pin mini DIN)
Luminance signal: 1 Vp-p, 75Ω unbalanced, negative SYNC
Color signal: 0.3 Vp-p, 75 Ω , unbalanced
S video output (4-pin mini DIN)
Luminance signal: 1 Vp-p, 75Ω unbalanced, negative SYNC
Color signal: 0.3 Vp-p, 75 Ω , unbalanced
Audio input Pin jack
Input level: -7.5 dBs (0 dBs=0.775 Vrms)
Audio output Pin jack
Rated output: -7.5 dBs (with 47 kΩ load)
Output impedance: Less than 1 kΩ

### [Adjustment order]

Perform adjustment in the following order.


Power supply adjustment
Servo system adjustment
Video system adjustment
Audio system adjustment
Tuner system adjustment

## 9-2. POWER SUPPLY BLOCK ADJUSTMENT

### 9-2-1. Voltage Check (PS-196 Boards)

| | |
|---|---|
| Mode | E-E |
| Measuring Instrument | Digital multimeter |
| UNSW 5.6 V Check | |
| Measurement Point | Pin ⑥ of CN001 |
| Specified Value | 5.6 ± 0.2 V |
| UNSW − 5 V Check | |
| Measurement Point | Pin ⑨ of CN001 |
| Specified Value | − 5 ± 0.2 V |
| UNSW 9 V Check | |
| Measurement Point | Pin ④ of CN001 |
| Specified Value | 9 ± 0.5 V |
| UNSW 40 V Check | |
| Measurement Point | Pin ① of CN001 |
| Specified Value | 40 ± 2 V |
| UNSW − 30 V Check | |
| Measurement Point | Pin ④ of CN002 |
| Specified Value | − 30 ± 3 V |
| UNSW 5.7 V Check | |
| Measurement Point | Pin ② of CN002 |
| Specified Value | 5.7 ± 0.6 V |
| SW 5 V Check | |
| Measurement Point | Pin ⑧ of CN001 |
| Specified Value | 5 ± 0.2 V |
| SW − 5 V Check | |
| Measurement Point | Pin ⑩ of CN001 |
| Specified Value | − 5 ± 0.3 V |
| SW 9 V Check | |
| Measurement Point | Pin ③ of CN001 |
| Specified Value | 9 ± 0.2 V |
| SW 12 V Check | |
| Measurement Point | Pin ② of CN001 |
| Specified Value | 12 ± 0.5V |

Checking method:

1) Confirm that each voltage is at the specified level.

PS-196 BOARD ( COMPONENT SIDE )

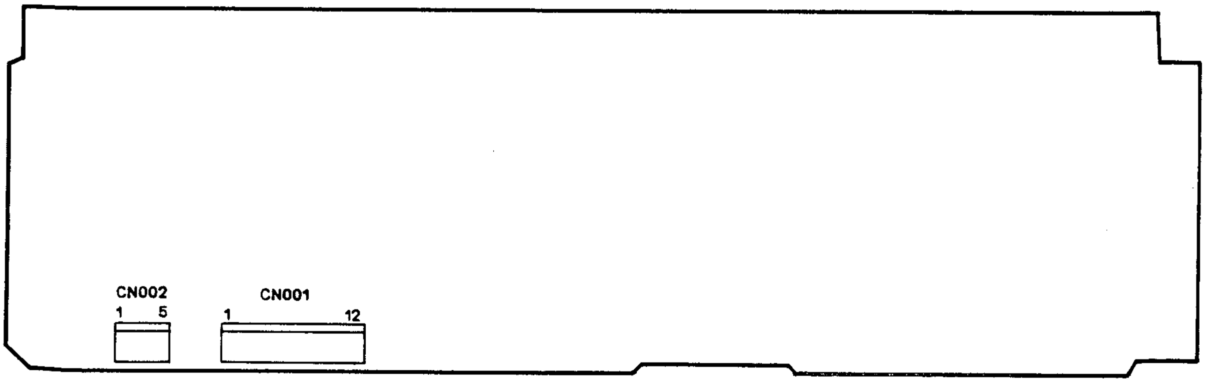


Fig. 9-5.

## 9-3. SYSTEM CONTROL SYSTEM ADJUSTMENT

### 9-3-1. Timer Clock Adjustment (FL-24 Board)

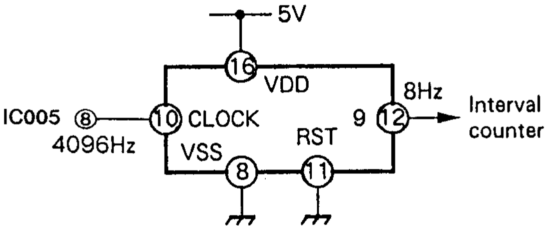
| | |
|---|---|
| Mode | E-E |
| Signal | Arbitrary |
| Measurement Point | Pin ⑧ of IC005 |
| Measuring Instrument | Interval counter |
| Adjustment Element | CT001 |
| Specified Value | 0.125 ± 0.0000005 sec |

[Adjustment Method]

1) Pass a 9-state binary counter through pin ⑧ of IC005, to divide the 4096Hz frequency nine times and transform to 8Hz.Measure the cycle.
2) Adjust CT001 so that an 8Hz cycle equals 0.125 ±0.0000005 seconds.

**Note** : Do not adjust CT001 except when replacing microcomputers.

9 Stage Binary Counter Reference



IC μ PD4020B or μ PD4040B

Fig. 9-6.

## 9-4. SERVO SYSTEM ADJUSTMENT

### 9-4-1. PWM Oscillation Frequency (CM-15 Board)

| | |
|---|---|
| Mode | REC |
| Signal | Arbitrary |
| Measurement Point | Pin ⑦ of IC502 |
| Measuring Instrument | Frequency counter |
| Adjustment Element | RV501 |
| Specified Value | 476.56 ± 5 kHz |

Adjustment Method:

1) Adjust to 476.56 ± 5 kHz with RV501.

### 9-4-2. Switching position Adjustment (CM-15 Board)

| | |
|---|---|
| Mode | Playback |
| Signal | Alignment tape: tracking adjustment (WR5-1CP) |
| Measurement Point | CH1: Pin ③ (RF CH2) of CN005 on RP-74 board<br>CH2: Pin ② (RF SW PLS) of CN005 on RP-74 board |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV401 |
| Specified Value | 0 ± 5 μs |

Connection:

1) TEST 1 mode (Pin ③ and Pin ④ with a jumper wire of CN503 on IN-24 board).

Adjustment method:

1) Adjust with RV401 so that the marker of the RF CH 2 waveform is lined up with the falling edge of the RF SWP waveform.

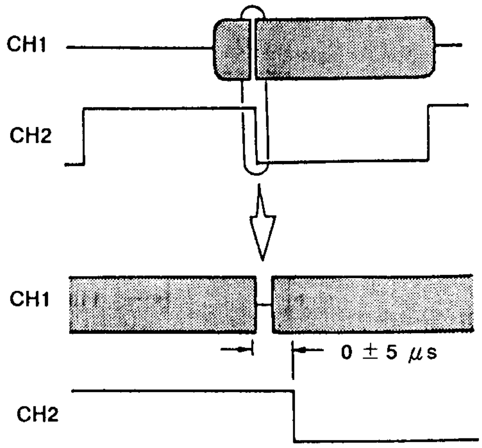


Fig. 9-7. Switching position adjustment

## 9-5. VIDEO ADJUSTMENT

As a rule, adjustment of the video system is made in the following order.
The color video signal supplied from the pattern generator is used as the video input signal for adjustment of the video system in the recording mode. Confirm that the sync signal and color burst signal satisfy the specifications designated in the adjustment setup shown in Fig. 8-3.

**[Adjustment Method]**

1) Playback Frequency Characteristics Adjustment
2) Flying Erase Check
3) FSC fo Adjustment
4) ORC SP (LP) Adjustment
5) Y/C Separation Comb-type Filter Adjustment
6) Y Comb-type Filter Adjustment
7) SYNC AGC Adjustment
8) PB Emphasis out Level Adjustment
9) Deemphasis Adjustment
10) STD Mode PB Y Level Adjustment
11) Hi8 Mode PB Y Level Adjustment
12) STD Mode Y FM Carrier Frequency, Y FM Deviation Adjustment
13) Hi8 Mode Y FM Carrier Frequency, Y FM Deviation Adjustment
14) 378 fH VCO Adjustment
15) Chroma Emphasis fo Adjustment
16) Carrier Balance Adjustment
17) fo VCO Adjustment
18) GCA Gain Adjustment
19) REC Y Level Adjustment
20) REC C Lecel Adjustment
21) D. O. C. Level Adjustment

### 9-5-1. Playback Frequency Characteristics Adjustment (RP-74 Board)

#### 1. SP Playback frequency characteristics adjustment

The adjusting element for CH2 mode is shown within [ ].

| Mode | Playback |
|---|---|
| Signal | Alignment tape:<br>Frequency characteristics adjustment (WR5-7CE) |
| Measurement Point | Pin ④ of CN005 [Pin ③ of CN005]<br>External trigger: Pin ② (RF SWP) of CN005<br>Trigger slope: − [+] |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV202 [RV201] |
| Specified Value | 8.5 MHz level is 66% of 4.5 MHz level |

Connection:

1) TEST 2 mode (Pin ② and Pin ③ with a jumper wire of CN503 on IN-24 board).

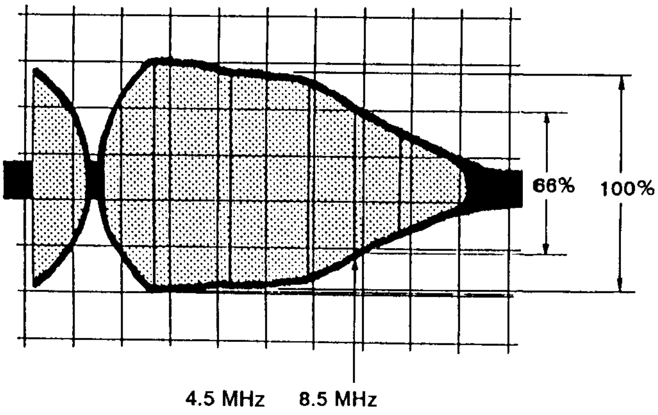


Fig. 9-8.

#### 2. LP playback frequency characteristics adjustment

The adjusting element for CH2 mode is shown within [ ].

| Mode | Playback |
|---|---|
| Signal | Alignment tape:<br>Frequency characteristics adjustment (WR5-7CE) |
| Measurement Point | Pin ⑥ of CN005 [Pin ⑤ of CN005]<br>External trigger: Pin ② (RF SWP) of CN005<br>Trigger slope: − [+] |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV102 [RV101] |
| Specified Value | 8.5 MHz level is 66% of 4.5 MHz level |

Connection:

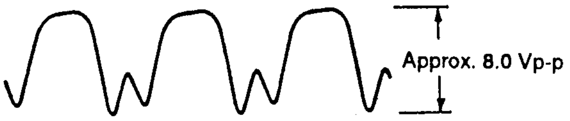
1) TEST 2 mode.

### 9-5-2. Flying Erase Check (RP-74 Board)

| | |
|---|---|
| Mode | REC |
| Signal | Arbitrary |
| Measurement Point | Pin ② of CN001 |
| Frequency Check | |
| Measuring Instrument | Frequency counter |
| Measuring | 7.6 ± 0.5 MHz |
| Output Level Check | |
| Instrument | Oscilloscope |
| Specified Value | Approx. 8 Vp-p |

**Notes:** 1) Use MP-type tape.
2) Connect the frequency counter through a buffer amplifier (oscilloscope, etc.) having high input impedance (at least 1 MΩ ) and low capacitance (less than 10 pF).

Adjustment method:
1) Confirm the frequency and output level are 7.6 ± 0.5 MHz and approximately 8.0 Vp-p respectively.



(7.6 ± 0.5 MHz)

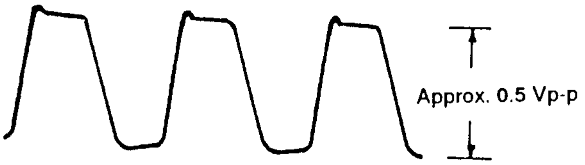
Fig. 9-9.

### 9-5-3. FSC fo Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | Playback |
| Signal | Alignment tape:<br>operation checking (WR5-4CSP or WR5-5CSP) |
| Measurement Point | Pin ⑭ of IC801 |
| Measuring Instrument | Frequency counter |
| Adjustment Element | CV800 |
| Specified Value | 4433619 ± 50 Hz |

**Note:** Connect the frequency counter through a buffer amplifier (oscilloscope, etc.) having high input impedance (at least 1 MΩ ) and low capacitance (less than 10 pF).

Adjustment method:
1) Adjust to 4433619 ± 50 Hz using CV800.



(4433619 ± 50 Hz)

Fig. 9-10.

### 9-5-4. (a) ORC SP Mode adjustment (VI-65 Board)

The adjusting element for CH2 mode is shown within [ ].

| | |
|---|---|
| Mode | REC Pause (MP type Tape) |
| Signal | WHITE Signal 50% |
| Measurement Point | Pin ④ of CN005 [Pin ③ of CN005] on RP-74 Board |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV304 [RV303] |
| Specified Value | Maximize Envelope |

Connection:
1) TEST 2 mode.

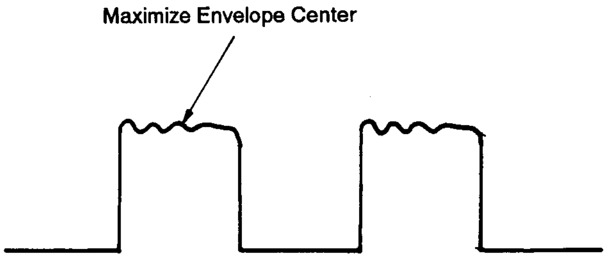


Fig. 9-11.

### 9-5-4. (b) ORC LP Mode adjustment (VI-65 Board)

The adjusting element for CH2 mode is shown within [ ].

| | |
|---|---|
| Mode | REC Pause (MP type Tape) |
| Signal | WHITE Signal 50% |
| Measurement Point | Pin ⑥ of CN005 [Pin ⑤ of CN005] on RP-74 Board |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV305 [RV302] |
| Specified Value | Maximize Envelope |

Connection:
1) TEST 2 mode.

### 9-5-5. Y/C Separation Comb-type Filter Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | Colour bars (Pin ㉞ of IC400) 1 Vp-p |
| Measurement Point | Pin ㉙ of IC400 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | LV400 and RV400 |
| Specified Value | Minimum chroma component<br>(less than 50 m Vp-p) |

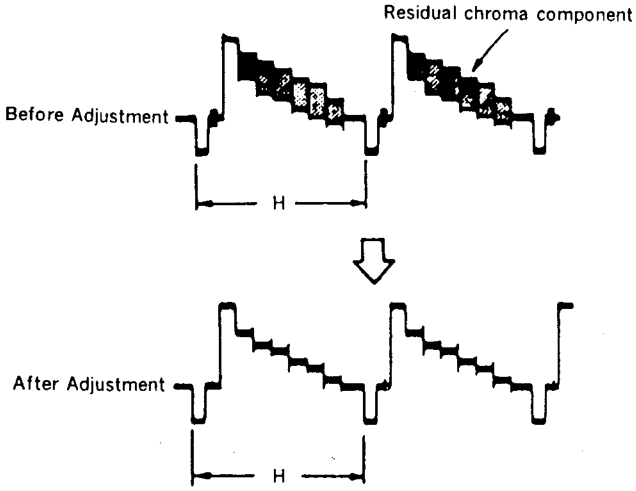


Fig. 9-12.

### 9-5-6. Y Comb-type Filter Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | E-E (LP mode) |
| Signal | Color bars |
| Measurement Point | Pin ⑫ of IC400 |
| Measuring Instrument | Oscilloscope (1: 1 probe used) |
| Adjustment Element | RV401 |
| Specified Value | Set amplitude to minimum |

**Note:** Be sure to perform adjustment in LP mode.

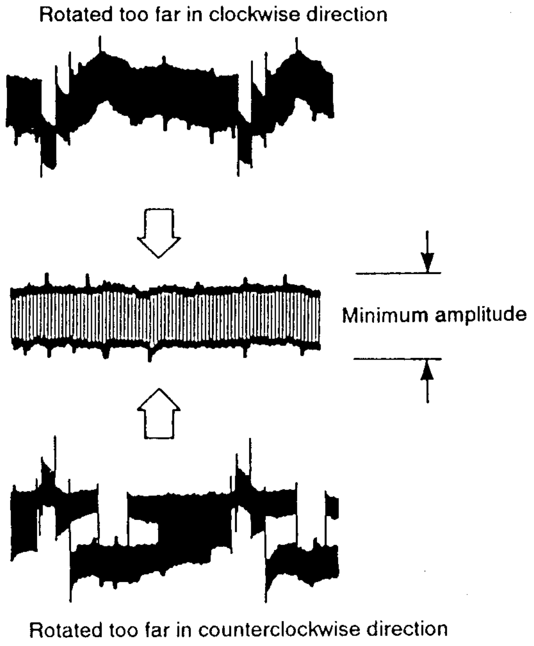


Fig. 9-13.

### 9-5-7. SYNC AGC Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | Color bars |
| Measurement Point | C205 ⊕ |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV105 |
| Specified Value | 0.50 ± 0.025 Vp-p |

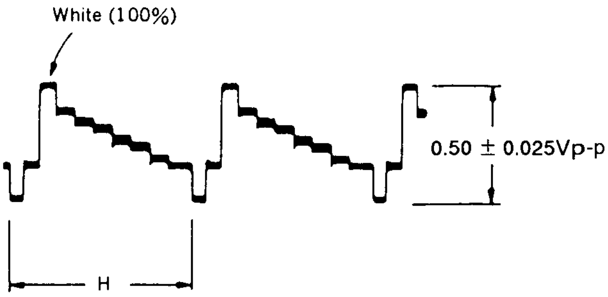


Fig. 9-14.

### 9-5-8. PB Emphasis out Level Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | Playback |
| Signal | Alignment tape:<br>Operation checking (WR5-5CSP or WR5-4CSP)<br>Color bar section |
| Measurement Point | Q123Ⓔ |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV102 |
| Specified Value | 0.50 ± 0.02 Vp-p |

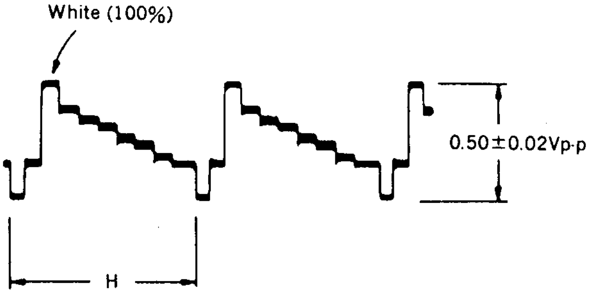


Fig. 9-15.

### 9-5-9. Deemphasis Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | Playback |
| Signal | Alignment tape:<br>Operation checking (WR5-4CSP or WR5-4CSP)<br>Color bar section |
| Measurement Point | Q123Ⓔ |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV103 |
| Specified Value | 100% white level is flat |

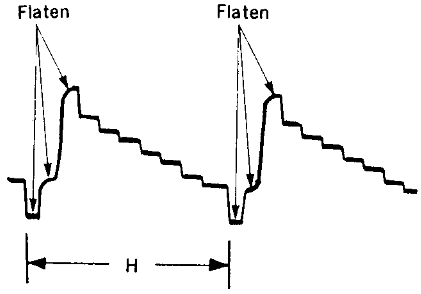


Fig. 9-16.

### 9-5-10. STD Mode PB Y Level Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | Playback |
| Signal | Alignment tape:<br>Operation checking (WR5-4NSP or WR5-4NSP)<br>Color bar section |
| Measurement Point | Pin ⑲ of CN002 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV104 |
| Specified Value | 1.00 ± 0.05 Vp-p |

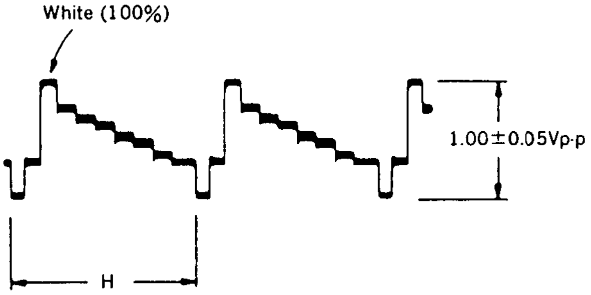


Fig. 9-17.

### 9-5-11. Hi8 Mode PB Y Level Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | Playback |
| Signal | Alignment tape:<br>Operation checking (WR5-8NSE)<br>Color bar section |
| Measurement Point | Pin ⑲ of CN002 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV101 |
| Specified Value | 1.00 ± 0.05 Vp-p |

**Note:** 1) Set the picture quality adjustment knob to the center click position.
2) Be sure to perform "9-5-10. STD Mode PB Y Level Adjustment" before this adjustment.

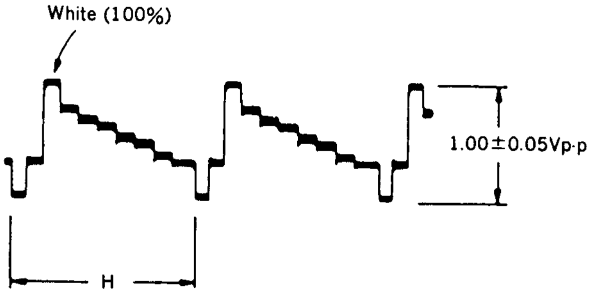


Fig. 9-18.

### 9-5-12. STD Mode Y FM Carrier Frequency, Y FM Deviation Adjustment

**Note:** After adjustment, perform "9-5-13. Hi8 Mode Y FM Carrier Frequency, Y FM Deviation Adjustment".

#### 1. STD mode Y FM carrier frequency adjustment (VI-65 board)

| | |
|---|---|
| Mode | E-E |
| Signal | No signal |
| Measurement Point | Pin ④ (REC RF) of CN003 |
| Measuring Instrument | Frequency counter |
| Adjustment Element | RV203 |
| Specified Value | 4.38 ± 0.03 MHz |

Adjustment method:
1) Insert an MP-type cassette tape.
2) Adjust to 4.38 ± 0.03 MHz using RV203.
3) Perform "2. STD Mode Y FM Deviation Adjustment".

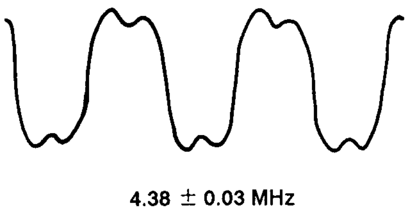


Fig. 9-19.

#### 2. STD mode Y FM deviation adjustment (VI-57 board)

| | |
|---|---|
| Mode | REC and playback |
| Signal | Color bars |
| Measurement Point | Pin ⑲ of CN002 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV205 |
| Specified Value | Playback level is 1.00 ± 0.05 Vp-p |

**Note:** Perform this adjustment after confirming that "9-5-10. STD Mode PB Y Level Adjustment", and "9-5-12. 1. STD Mode Y FM Carrier Frequency Adjustment" have been completed.

Adjustment method:
1) Insert an MP type cassette tape.
2) Record the color bar signal.
3) Playback the recorded signal.
4) Check the playback output level.
Specified value: 1.00 ± 0.05 Vp-p
5) If the specified value is not satisfied, rotate RV205 as described below and repeat steps 1) through 3).

| | Rotational direction for RV205 |
|---|---|
| Smaller than specified value | Counterclockwise direction (↺) |
| Larger than specified value | Clockwise direction (↻) |

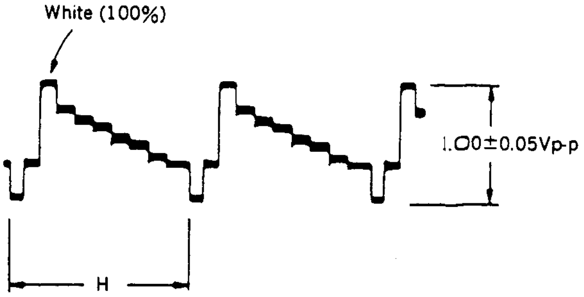


Fig. 9-20.

## 9-5-13. Hi8 Mode Y FM Carrier Frequency, Y FM Deviation Adjustment

**Notes:**
1) Perform this adjustment after "9-5-11. STD Mode Y FM Carrier Frequency, Y FM Deviation Adjustment".
2) Before adjustment, confirm that the Hi8 switch (S003 on FL-24 board) is set to the AUTO position, and that the connector is attached to the S video terminal (CNJ505 on RJ-5 board) of the line input (even when there is no signal).

### 1. Hi8 mode Y FM carrier frequency adjustment (VI-65 board)

| | |
|---|---|
| Mode | E-E |
| Signal | No signal |
| Measurement Point | Pin ④ of CN003 |
| Measuring Instrument | Frequency counter |
| Adjustment Element | RV204 |
| Specified Value | 5.98 ± 0.03 MHz |

Adjustment method:
1) Insert an ME-type cassette tape.
2) Adjust to 5.98 ± 0.03 MHz using RV204.
3) Perform "2. Hi8 Mode Y FM Deviation Adjustment".

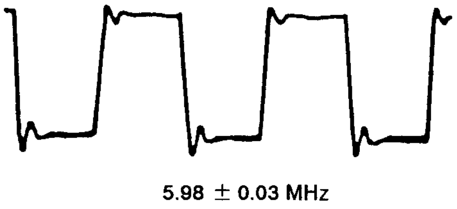


Fig. 9-21.

### 2. Hi8 mode Y FM deviation adjustment (VI-65 board)

| | |
|---|---|
| Mode | REC and playback |
| Signal | Color bars |
| Measurement Point | Pin ⑲ of CN002 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV202 |
| Specified Value | Playback level is 1.00 ± 0.05 Vp-p |

**Note:** Perform this adjustment after confirming that "9-5-11. PB Y Level Adjustment", and "9-5-13. 1. Hi8 Mode Y FM Carrier Frequency Adjustment" have been completed.

Adjustment method:
1) Insert an ME-type cassette tape.
2) Record the color bar signal.
3) Playback the recorded signal.
4) Check the playback output level.
   Specified value: 1.00 ± 0.05 Vp-p
5) If the specified value is not satisfied, rotate RV202 as described below and repeat steps 1) through 3).

| | Rotational direction for RV202 |
|---|---|
| Larger than specified value | Counterclockwise direction (↺) |
| Smaller than specified value | Clockwise direction (↻) |

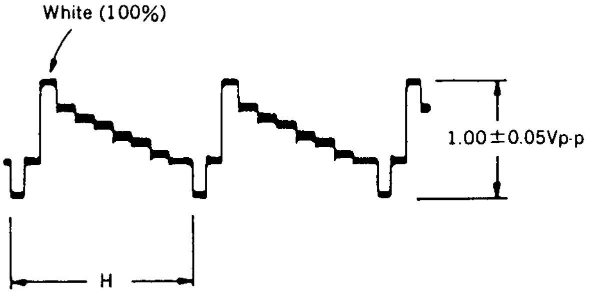


Fig. 9-22.

### 9-5-14. 378$f_H$ VCO Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | Colour bars |
| Measurement Point | Pin ㉖ of IC801 |
| Measuring Instrument | Digital voltmeter |
| Adjustment Element | RV801 |
| Specified Value | 3.00 ± 0.05 Vdc |

Adjustment method:
1) Adjust to 3.00 ± 0.05 Vdc using RV801

### 9-5-15. Chroma Emphasis $f_0$ Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | Colour bars |
| Measurement Point | Pin ㊹ of IC801 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | FL801 |
| Specified Value | Minimum chroma component |

Preparations:
1) Connect the following two locations using 10 kΩ resistors.
- Pin ⑦ of IC801 – Pin ㊸ of IC 801 (GND)
- Pin ⑦ of IC801 – Pin ㉙ of IC 801 (SW 5 V)

Adjustment method:
1) Adjust FL802 for minimum chroma component.
2) Remove the 10 kΩ resistors after adjustment.

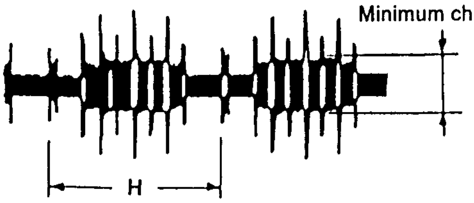


Fig. 9-23.

### 9-5-16. Carrier Balance Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | Colour bars |
| Measurement Point | Pin ㊳ of IC801 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV800 |
| Specified Value | Minimum 5.17 MHz component |

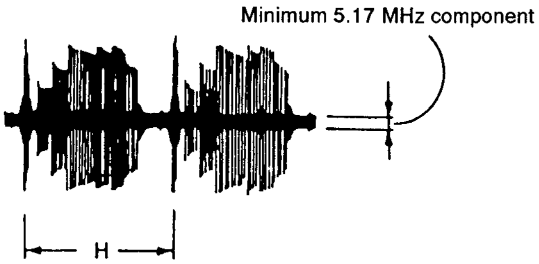


Fig. 9-24.

### 9-5-17. $f_0$ VCO Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | Colour bars (VIDEO) |
| Measurement Point | Pin ⑮ of IC700 |
| Measuring Instrument | Frequency counter |
| Adjustment Element | RV701 |
| Specified Value | 15,625 ± 50 Hz |

Connection:
1) Connect the IC700 pins ⑫ and ⑥ (GND) with a jumper wire.

Adjustment method:
1) Adjust to 15,625 ± 50 Hz with RV701.

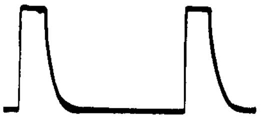


Fig. 9-25.

### 9-5-18. GCA Gain Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | Playback and STILL, CUE, REVIEW |
| Signal | Alignment tape for operation checking (WR5-5CSP or WR5-3CSP) Color bar portion |
| Measurement point | IC700 pin ⑤ |
| Measuring instrument | Oscilloscope |
| Adjustment element | RV700 |
| Specified value | b=(a−20)±15mVp-p |

**[Adjustment Method]**

1) Playback, and measure the burst level. (this level is ⓐ)
2) Set to the STILL, CUE and REVIEW mode, and measure the burst level once more. (this level is ⓑ)
3) With RV701 adjust the burst level of the STILL, CUE and REVIEW mode to ⓑ=(ⓐ−20)±15mVp-p.

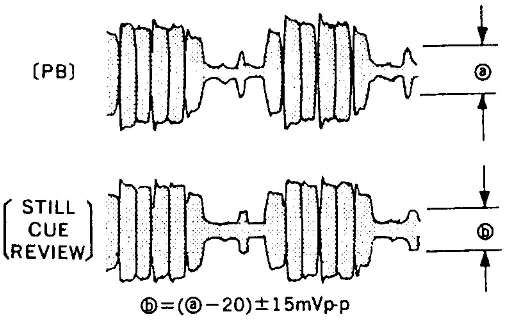


Fig. 9-26.

### 9-5-19. REC Y Level Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | No signal |
| Measurement Point | Pin ④ of CN003 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV300 |
| Specified Value | 0.60 ± 0.02 Vp-p |

**Note:** 1) Use MP-type tape.

Adjustment method:

1) Adjust to 0.60 ± 0.02 Vp-p using RV300.

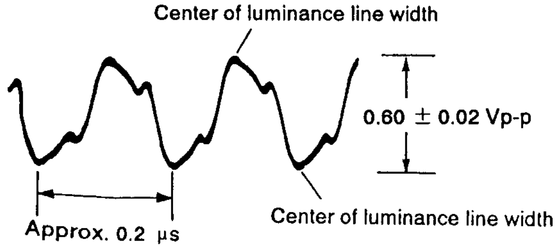

Center of luminance line width
0.60 ± 0.02 Vp-p
Approx. 0.2 μs
Center of luminance line width

Fig. 9-27.

### 9-5-20. REC C Level Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | E-E (Tape: MP) Hi8 mode |
| Signal | Colour bars |
| Measurement Point | Collector of Q328 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV301 |
| Specified Value | 0.20 ± 0.01 Vp-p |

**Note:** 1) Use MP-type tape.

Preparations:

1) Use jumper wires to make the following three connections.
    - Pin ⑥ of CN001(REC AFM) − GND
    - Pin ⑧ of CN001(REC ATF) − GND

Adjustment method:

1) Adjust to 0.20 ± 0.01 Vp-p using RV301.

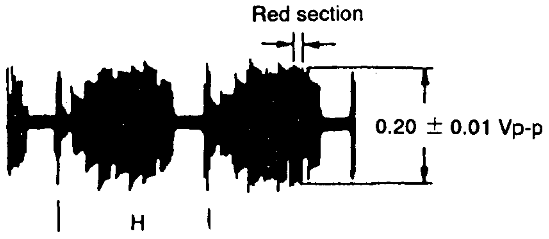


Fig. 9-28.

### 9-5-21. D. O. C. Level Adjustment (VI-65 Board)

| | |
|---|---|
| Mode | Playback |
| Signal | Self-recording and playback of Hi8 in MPHG tape, and colour bars in LP mode. |
| Measurement Point | Pin ③ of Q608 |
| Measuring Instrument | Digital voltmeter |
| Adjustment Element | RV601 |
| Specified Value | 1.76 ± 0.01 V |

## 9-6. SECAM-PAL CONVERSION SYSTEM ADJUSTMENT (AEP model only)

- Make this adjustment aligning the PAL video system.
- For this adjustment, use the equipment listed below.

**[Equipment Required]**

(1) PAL Colour Monitor TV
(2) Oscilloscope, Dual-trace, Bandwidth...more than 10MHz with delay mode
(3) SECAM colour-bar generator
(4) PAL vector scope
(5) Frequency counter
(6) Digital voltmeter

**Setting up during adjustment**

Video signals output by a pattern generator are used as adjustment signals when making the electrical adjustments, and these video output signals should be within the required standard. Connect an oscilloscope to CNJ501 (VIDEO IN) on the RJ-5 Board. Check that the amplitudes of video signal SYNC signals, picture portions, and line ID signals are flat at approximately 0.3, 0.7, and 0.3V, respectively. Fig. 9-29. shows video signals (colour bars) used in making the electrical adjustment.

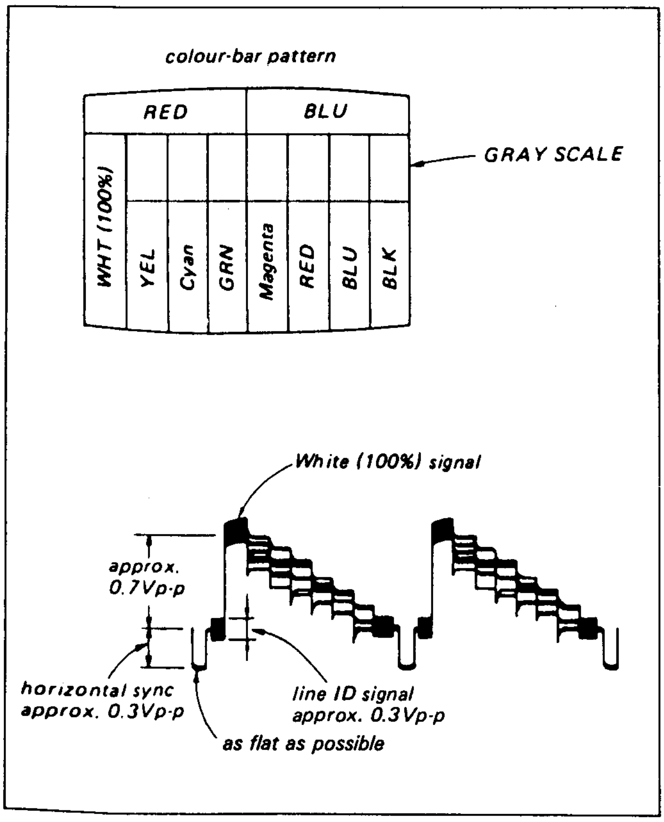

colour-bar pattern
RED
BLU
GRAY SCALE
WHT (100%)
YEL
Cyan
GRN
Magenta
RED
BLU
BLK
White (100%) signal
approx. 0.7Vp-p
horizontal sync approx. 0.3Vp-p
line ID signal approx. 0.3Vp-p
as flat as possible

Fig. 9-29.

### 9-6-1. fH VCO Adjustment (YC-64 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | No signal |
| Measurement Point | Pin ⑨ of IC201 |
| Measuring Instrument | Frequency counter |
| Adjustment Element | RV201 |
| Specified Value | 15,625 ± 0.01 kHz |

**[Connection]**

Connect between pin ⑱ of IC201 and pin ⑲ of IC201 with a jumper wire.

**[Adjustment method]**

1) Adjust with RV201 so that it becomes 15.625 ± 0.01 kHz.

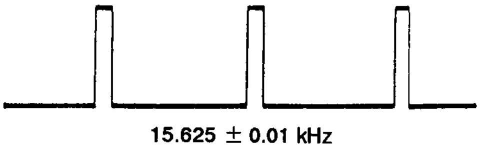

15.625 ± 0.01 kHz

Fig. 9-30.

### 9-6-2. I REF Adjustment (YC-64 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | SECAM colour-bar |
| Measurement Point | Pin ⑨ of IC201<br>Pin ① of CN001 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV202 |
| Specified Value | tr = 4.5 ± 0.1 $\mu$s |

**[Adjustment method]**

1) IC201 (⑱ – ⑲ OPEN)

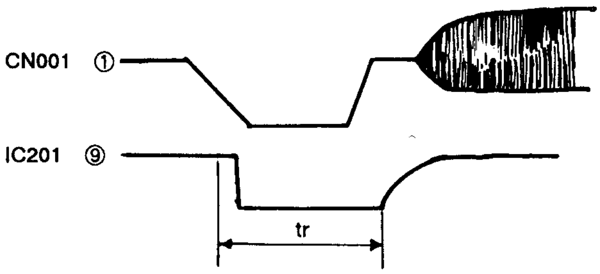

CN001 ①
IC201 ⑨
tr

Fig. 9-31.

### 9-6-3. Bell Filter Adjustment (YC-64 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | SECAM colour-bar |
| Measurement Point | Pin ㉙ of IC201 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | LV201 |
| Specified Value | The level variation of the chroma signal amplitude is 0 ± 10% |

**Note:** When performing (Adjustment method 1) be sure to use 1:1 probe as the signal level of IC201 pin ㉙ is extremely small. In addition, when the adjustment is impossible because of the signal level is too small to read, perform (Adjustment method 2).

**[Adjustment method 1]**

1) Adjust LV201 until the waveform is flat.

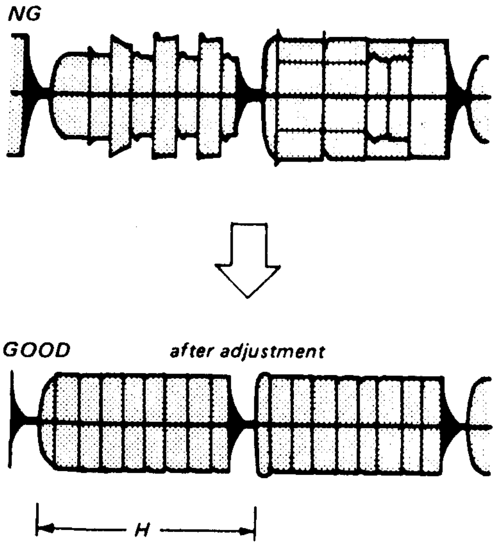


Fig. 9-32.

**[Adjustment method 2]**

1) Set the picture level of the monitor TV to maximum.
2) Adjust by turning LV201 so that the boarders of the respective colour-bars (especially red and blue) become vivid and stop LV201 at the position where the beat (red and magenta sections) becomes small.

### 9-6-4. Colour Level Adjustment (YC-64 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | SECAM colour-bar |
| Measurement Point | Pin ③ of IC202 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV203 |
| Specified Value | 0.75 ± 0.05 Vp-p |

**Note:** IC201 (⑲ – ㉑ SHORT)

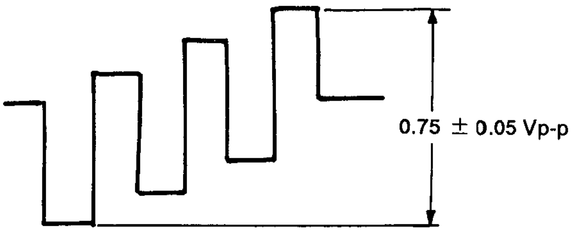


Fig. 9-33.

### 9-6-5. R-Y fo Adjustment (YC-64 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | SECAM colour-bar |
| Measurement Point | Pin ② of IC202 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | LV202 |
| Specified Value | Less than 0.05 V |

**[Adjustment method]**

1) IC201 (⑲ – ㉑ SHORT)

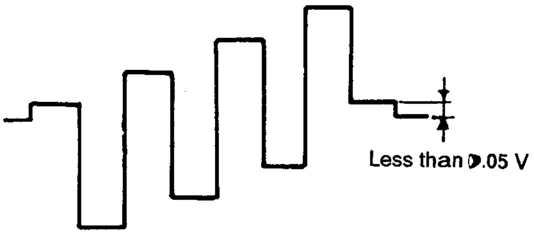


Fig. 9-34.

### 9-6-6. B-Y $f_0$ Adjustment (YC-64 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | SECAM colour-bar |
| Measurement Point | Pin ③ of IC202 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | LV203 |
| Specified Value | Less than 0.05 V |

**[Adjustment method]**

1) IC201 (⑲－㉑ SHORT)

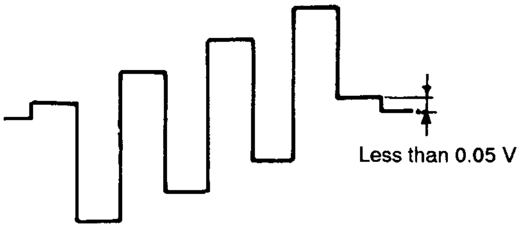


Fig. 9-35.

## 9-7. DIGITAL ADJUSTMENTS

**[Adjustment Sequence]**

- **9-7-1. Decoder-oscillated Free Run Frequency Adjustment**
- **9-7-2. Encoder-oscillated Free Run Frequency Adjustment**
- **9-7-3. TINT Adjustment**
- **9-7-4. V OUT SUB Color Level Adjustment**
- **9-7-5. V OUT SUB C Hue Adjustment**
- **9-7-6. Write Clock Adjustment**
- **9-7-7. S OUT SUB C Hue Adjustment**
- **9-7-8. SUB Y Level Adjustment**
- **9-7-9. Color Level Adjustment**
- **9-7-10. CG OSC Adjustment**

### 9-7-1. Decoder-oscillated Free Run Frequency Adjustment (DS-35 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | Monoscope |
| Measurement Point | IC209 pin ⑱ |
| Measuring Instrument | Frequency counter |
| Adjustment Element | CV202 |
| Specified Value | 4,433,619 ± 25Hz |

**[Connection]**

1) Connect IC209(R121 side) and GND with a jumper wire.

**Note** : Connect the frequency counter through a buffer amplifier(oscilloscope, etc).of high input impedance (10M Ω or more) and low capacity (10pF or less).

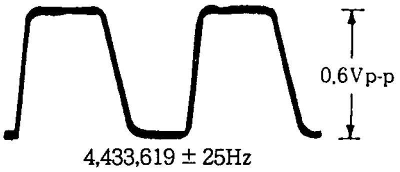


Fig. 9-36.

### 9-7-2. Encoder-oscillated Free Run Frequency Adjustment (DS-35 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | Alignment tape SP monoscope |
| Measurement Point | IC213 pin ⑲ |
| Measuring Instrument | Frequency counter |
| Adjustment Element | CV203 |
| Specified Value | 17,734,473 ± 100Hz |

**[Connection]**

1) Connect IC213 pin ⑱ and VCC with a jumper wire.

**Note** : Connect the frequency counter through a buffer amplifier ( oscilloscope, etc ) . of high input impedance (10M Ω or more) and low capacity (10pF or less).

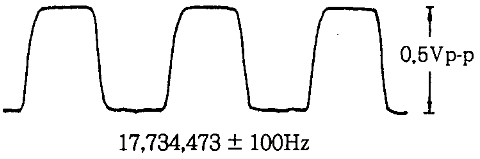


Fig. 9-37.

### 9-7-3. (a) TINT Adjustment (DS-35 Board)

| | |
|---|---|
| Mode | E-E (P in P) |
| Signal | Color bar |
| Measurement point | Q501Ⓔ |
| Measurement equipment | Oscilloscope |
| Adjustment element | RV202 |
| Specified value | A=B |

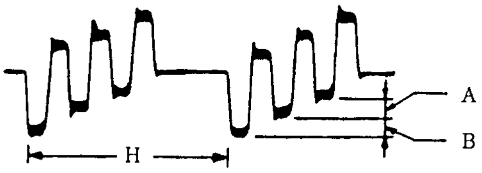
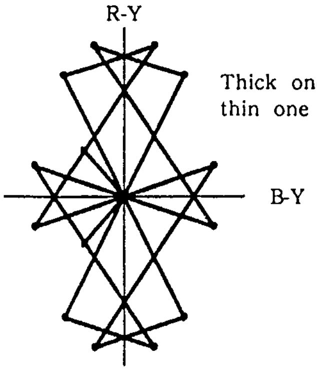


Fig. 9-38.

### 9-7-3. (b) TINT Adjustment (DS-35 Board)

| | |
|---|---|
| Mode | E-E (P in P) |
| Signal | Color bar |
| Measurement point | RJ-6 board (EURO-AV) |
| Measurement equipment | Vectorscope |
| Adjustment element | RV202 |
| Specified value | Adjust the vector phase of the small image so that the double waveforms become one clear waveform. |



Thick one for parent, thin one for child.

Fig. 9-39.

### 9-7-4. (a) V OUT SUB Colour Level Adjustment (DS-35 Board)

| | |
|---|---|
| Mode | E-E (P in P) |
| Signal | 100% Chroma |
| Measurement Point | Pin ⑥ of CN202 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV201 |
| Specified Value | 700 ± 50mVp-p |

**[Adjustment Method]**

1) Adjust to 700 ± 50mVp-p Using RV201 (Child screens)

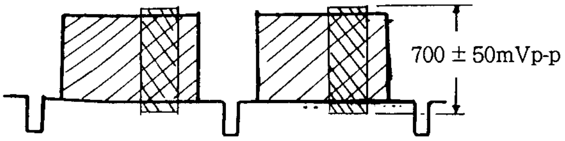


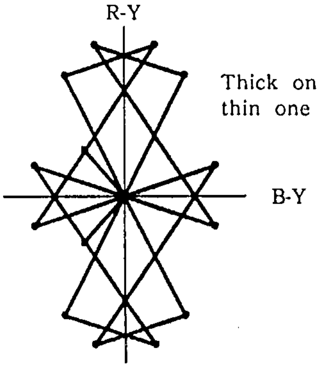
Fig. 9-40.

### 9-7-4. (b) V OUT SUB Colour Level Adjustment (DS-35 Board)

| | |
|---|---|
| Mode | E-E (P in P) |
| Signal | Color bar |
| Measurement point | RJ-6 board<br>(EURO-AV OUT) |
| Measurement equipment | Vectorscope |
| Adjustment element | RV201 |
| Specified value | The phases of the parent and child screens should be the same. |

**[Adjustment Method]**

1) With RV201 match the phases of the parent and child screens.



Thick one for parent, thin one for child.

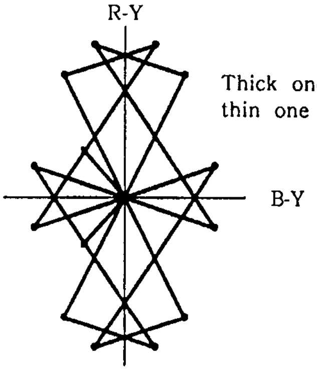
Fig. 9-41.

### 9-7-5. V OUT SUB C Hue Adjustment (DS-35 Board)

| | |
|---|---|
| Mode | E-E (P in P) |
| Signal | Color bar |
| Measurement point | RJ-6 board<br>(EURO-AV OUT) |
| Measurement equipment | Vectorscope |
| Adjustment element | RV206 |
| Specified value | Hue of parent screen = that of child screen |

**[Adjustment Method]**

1) With RV206 match the phases of the parent and child screens.



Thick one for parent, thin one for child.

Fig. 9-42.

### 9-7-6. Write Clock Adjustment (DS-35 Board)

| | |
|---|---|
| Mode | E-E |
| Signal | Colour bar |
| Measurement Point | IC505 pin ① |
| Measuring Instrument | Frequency counter |
| Adjustment Element | CV501 |
| Specified Value | 5.00 ± 0.01MHz |

**[Connection]**

1) Connect the IC505 pin ⑪ and GND with a jumper wire.

**Note :** Connect the frequency counter through a buffer amplifier (oscilloscope, etc.) of high input impedance (10M Ω or more) and low capacity (10pF or less).

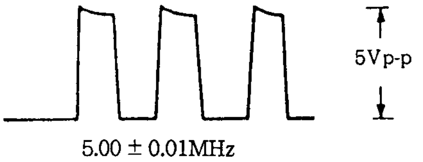


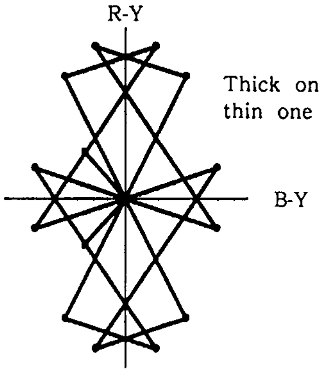
Fig. 9-43.

### 9-7-7. S OUT SUB C Hue Adjustment (DS-35 Board)

| | |
|---|---|
| Mode | E-E (P in P) |
| Signal | Colour bar |
| Measurement Point | S VIDEO OUT |
| Measuring Instrument | Vectorscope |
| Adjustment Element | RV204 |
| Specified Value | Hue of parent screen = that of child screen |

**[Adjustment Method]**

1) With RV204 match the phases of the parent and child screens.



Thick one for parent, thin one for child.

Fig. 9-44.

### 9-7-8. SUB Y Level Adjustment (DS-35 Board)

| | |
|---|---|
| Mode | E-E (P in P) |
| Signal | Colour bar (PAL) |
| Measurement Point | Pin ⑥ of CN202 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV203 |
| Specified Value | Less than 0.05V |

1) Pin ⑱ of IC213 OPEN.

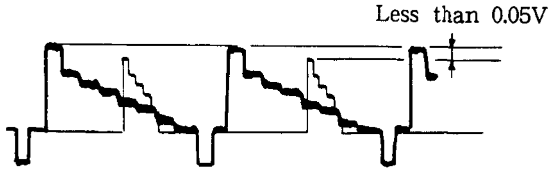


Fig. 9-45.

### 9-7-9. Color Level Adjustment (DS-35 Board)

| | |
|---|---|
| Mode | E-E (P in P) |
| Signal | Colour bar (PAL) |
| Measurement Point | Pin ⑧ of CN202 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV205 |
| Specified Value | Less than 0.05V |

1) Pin ⑱ of IC213 OPEN.

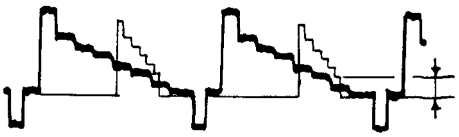


Fig. 9-46.

### 9-7-10. CG OSC Adjustment (DS-35 Board)

| | |
|---|---|
| Mode | E-E (P in P) |
| Signal | Colour bar (PAL) |
| Measurement Point | Pin ⑤ of CN204 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | CV201 |
| Specified Value | 6.86 ± 0.01MHz |

1) Pin ㉚ of IC204 − Pin ㉜ of IC204 Short.

## 9-8. AUDIO SYSTEM ADJUSTMENT

- Perform adjustment using the color bar signal as the video signal input.

### [Connection of measuring instruments for audio]

In addition to the measuring instruments for the video system, the measuring instruments shown in the figure below are used for the audio system.

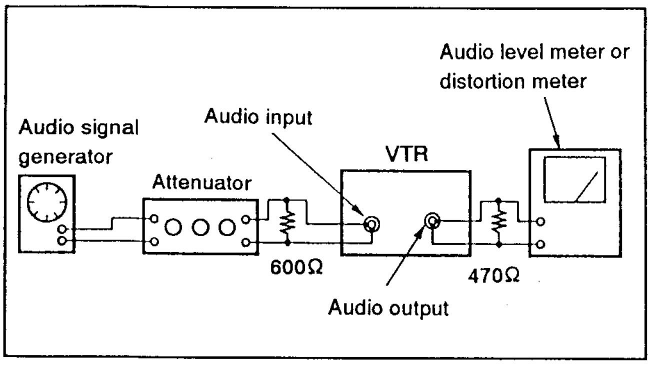


Fig. 9-47.

### [Adjustment procedure]

1) PCM Master Clock Oscillation Frequency Adjustment
2) REC PCM Level Check
3) PCM Playback VCO Free Oscillation Frequency Adjustment
4) PCM Playback Level Adjustment
5) E-E Output Level Check
6) PCM Offset Adjustment
7) PCM Recording Level Adjustment
8) Overall Frequency Characteristics Check
9) Overall Distortion Check
10) Overall Noise Level Check

### 9-8-1. PCM Audio Systen Adjustment

Unless indicated otherwise, set the VTR switches and controls to the following positions for adjustment.

Input select switch ········································· LINE
Audio monitor switch (PCM/mix/normal) ·················· PCM
REC LEVEL control ············································· 5

**Note:** The adjusting element for the R channel is indicated in [ ].

### 1. PCM master clock oscillation frequency adjustment (PC-39 board)

| | |
|---|---|
| Mode | REC |
| Signal | No signal |
| Measurement Point | Pin ⑳ of IC703 |
| Measuring Instrument | Frequency counter |
| Adjustment Element | CV701 |
| Specified Value | 11.50 ± 0.05 MHz |

Adjustment method:

1) Connect (Pin ㉖ of IC703) and Pin ㉗ jumper wire.
   - Pin (97) of IC703 – GND SHRT
   - Pin (89) IC703 – SW 5 V PULL UP by 560 Ω
2) Adjust to 11.50 ± 0.05 MHz using CV701.
3) Remove the jumper wire.

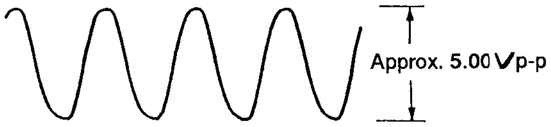


Fig. 9-48.

### 2. REC PCM level check (PC-39 board)

| | |
|---|---|
| Mode | REC |
| Signal | No signal |
| Measurement Point | Pin ① of CN701 |
| Measuring Instrument | Oscilloscope |
| Specified Value | Approx. 0.4 Vp-p |

Checking method:

1) Confirm that the REC PCM level is approximately 0.4 Vp-p.

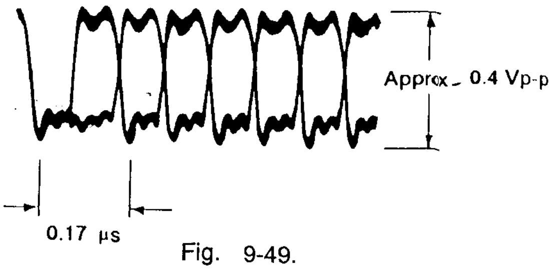


Fig. 9-49.

### 3. PCM playback VCO free oscillation frequency adjustment (PC-39 board)

| | |
|---|---|
| Mode | Playback, FF index search, and REW index search |
| Signal | Any tape |
| Measurement Point | Pin ⑧ of IC708 |
| Measuring Instrument | Frequency counter |
| Adjustment Element | RV707 (playback)<br>RV709 (FF index search)<br>RV708 (REW index search) |
| Specified Value | 11.50 ± 0.05 MHz (playback)<br>10.24 ± 0.05 MHz (FF index search)<br>12.75 ± 0.05 MHz (REW index search) |

Connections:

1) Connect (Pin ① of IC708) and Pin ⑭ (SW 5 V) of CN601 using a jumper wire.
2) Remove CN701 on the PC-39 board.

Adjustment method:

1) Set to the playback mode.
2) Adjust to 11.50 ± 0.05 MHz using RV707.
3) Set to the FF index search mode.
4) Adjust to 10.24 ± 0.05 MHz using RV709.
5) Set to the REW index search mode.
6) Adjust to 12.75 ± 0.05 MHz using RV708.

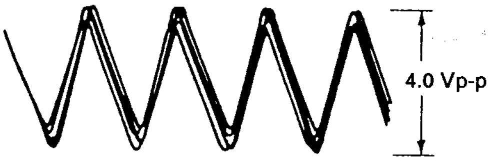


Fig. 9-50.

### 4. PCM playback level adjustment (PC-39 board)

| | |
|---|---|
| Mode | Playback |
| Signal | Alignment tape:<br>Operation checking (WR5-3CSP or WR4-9CSP)<br>400 Hz section |
| Measurement Point | Audio output L and R |
| Measuring Instrument | Audio level meter |
| Adjustment Element | RV705 |
| Specified Value | − 7.5 ± 0.5 dBs |

Adjustment method:

1) Adjust to − 7.5 ± 0.5 dBs using RV705.

### 5. E-E output level check

| | |
|---|---|
| Mode | E-E |
| Signal | 400 Hz, -7.5 dBs: audio input L [R] |
| Measurement Point | Audio output L [R] |
| Measuring Instrument | Audio level meter |
| Specified Value | − 7.5 ± 3 dBs |

Checking method:

1) Set the REC LEVEL control to the $\boxed{5}$ position.
2) Confirm that -7.5 dB is indicated on the REC LEVEL meter.
3) Confirm that the audio output L [R] level is − 7.5 ± 3 dBs

### 6. PCM offset adjustment (PC-39 board)

| | |
|---|---|
| Mode | Self-recording and playback (SP mode) |
| Signal | 400 Hz + 3 dBs |
| Measurement Point | Pin ⑬ [Pin ③] of IC612 |
| Measuring Instrument | Oscilloscope |
| Adjustment Element | RV701 [RV702] |
| Specified Value | Even clipping above and below waveform |

Adjustment method:

1) Perform self-recording and playback, then confirm that there is even clipping above and below the waveform.
2) If the amount of clipping is not even, rotate RV701 [RV702] as shown below, and confirm 1) again.

| | Rotational direction for RV701 [RV702] as seen from parts side |
|---|---|
| When amount of upper clipping is smaller | Counterclockwise direction (↺) |
| When amount of upper clipping is greater | Clockwise direction(↻) |

**Note:** Adjust RCH and LCH alternately as they will affect each other.

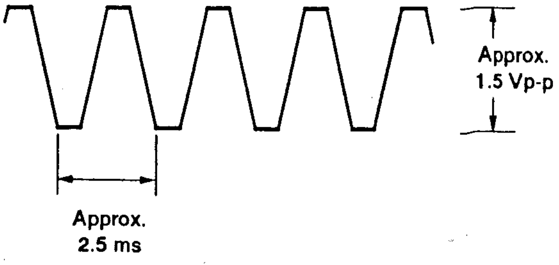


Fig. 9-51.

### 7. PCM recording level adjustment (PC-39 board)

| Mode | Self-recording and playback |
|---|---|
| Signal | 400 Hz, -7.5 dBs: audio input (L and R) |
| Measurement Point | Audio output |
| Measuring Instrument | Audio level meter |
| Adjustment Element | RV703 |
| Specified Value | -7.5 ± 0.5 dBs |

**Note:** Confirm that "PCM Playback Level Adjustment" has been completed.

Adjustment method:

1) Set to the E-E mode.
2) Adjust the REC LEVEL control so that the audio output level is -7.5 dBs. (Both left and right channels)
3) Record the signal.
4) Playback the recorded section.
5) Confirm that the audio output L level is − 7.5 ± 0.5 dB.
6) If the specified value is not satisfied, adjust with RV703 and repeat steps 1) through 5).

### 8. Overall frequency characteristics check

| Mode | Self-recording and playback |
|---|---|
| Measurement Point | Ⓐ 400 Hz, -7.5 dBs<br>Ⓑ 20 Hz, -7.5 dBs<br>Ⓒ 14 kHz, -7.5 dBs<br>:Audio input L [R] |
| Measuring Instrument | Audio output L [R] |
| Adjustment Element | Audio level meter |
| Specified Value | Confirm that when the 400 Hz playback output level is 0 dB, the 20 Hz playback output level is 0 ± 3 dB and the 14 kHz playback output level is $0^{+3}_{-3}$ dB. |

Checking method:

1) Adjust the REC LEVEL control so that the audio output L [R] level is -7.5 dBs.
2) Record signals Ⓐ through Ⓒ in order.
3) Playback the recorded section.
4) Confirm that when the 400 Hz playback output level is 0 dB, the 20 Hz playback output level is 0 ± 2 dB and the 14 kHz playback output level is $0^{+2}_{-3}$ dB.

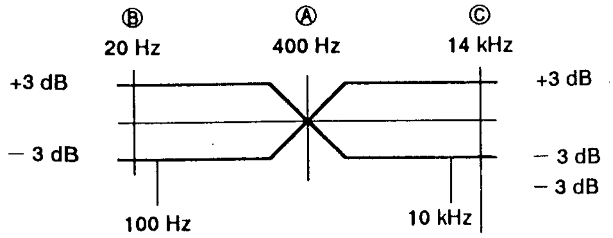


Fig. 9-52.

### 9. Overall distortion check

| Mode | Self-recording and playback |
|---|---|
| Signal | 400 Hz, -7.5 dBs: Audio input L [R] |
| Measurement Point | Audio output L [R] |
| Measuring Instrument | Distortion meter |
| Specified Value | Less than 0.35% |

Checking method:

1) Record the signal.
2) Playback the recorded section.
3) Confirm that the distortion is less than 0.35%.

### 10. Overall noise level check

| Mode | Self-recording and playback |
|---|---|
| Signal | No signal<br>(Shorting plug inserted into both audio input L and R terminals) |
| Measurement Point | Audio output L [R] |
| Measuring Instrument | Audio level meter |
| Specified Value | Less than − 82.0 dBs *2 |

Checking method:

1) Record the signal.
2) Playback the recorded section.
3) Confirm that the noise level is less than − 82.0 dBs. *2
   *2: Value when IHF-A hearing compensation filter is used.

## 9-8-2. AFM Audio System Adjustment

### [Adjustment Procedure]

1) AFM carrier frequency adjustment
2) AFM deviation adjustment
3) AFM matrix (L − R) adjustment
4) AFM matrix (L+R) adjustment
5) E-E output level check
6) Overall level characteristics check
7) Overall frequency characteristics check
8) Overall distortion check
9) Overall noise level check

### 1-1. AFM carrier frequency adjustment (1.5 MHz) (PC-39 board)

| | |
|---|---|
| Mode | REC (SP mode) |
| Signal | No signal |
| Measurement Point | Pin ⑬ of IC901 |
| Measuring Instrument | Frequency counter and oscilloscope |
| Adjustment Element | RV901 |
| Specified Value | 1500 ± 3 kHz |

Connect the IC401 pin ㉕ and Vcc (+5 V) with a 10 kΩ

Adjustment method:
1) Adjust to 1500 ± 3 kHz using RV901.

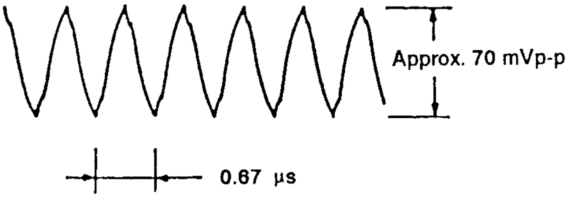


Fig. 9-53.

### 1-2. AFM carrier frequency adjustment (1.7 MHz) (PC-39 board)

| | |
|---|---|
| Mode | REC (SP mode) |
| Signal | No signal |
| Measurement Point | Pin ⑬ of IC801 |
| Measuring Instrument | Frequency counter and oscilloscope |
| Adjustment Element | RV801 |
| Specified Value | 1700 ± 3 kHz |

Connect the IC401 pin ㉕ and Vcc (+5 V) with a 10 kΩ

Adjustment method:
1) Adjust to 1700 ± 3 kHz using RV801.

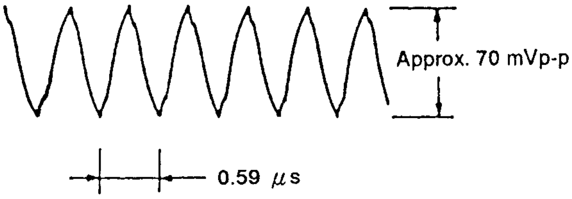


Fig. 9-54.

### 2-1. AFM deviation adjustment (1.5 MHz) (PC-39 board)

| | |
|---|---|
| Mode | Playback |
| Signal | Alignment tape: WR5-9CS<br>Operation checking<br>(AFM Bilingual Tape) |
| Measurement Point | Audio output L |
| Measuring Instrument | Audio level meter |
| Adjustment Element | RV902 |
| Specified Value | − 7.5 ± 0.5 dBs |

Adjustment method:
1) Adjust to − 7.5 ± 0.5 dBs using RV902.

### 2-2. AFM deviation adjustment (1.7 MHz) (PC-39 board)

| | |
|---|---|
| Mode | Playback |
| Signal | Alignment tape: WR5-9CS<br>Operation checking<br>(AFM Bilingual Tape) |
| Measurement Point | Audio output L |
| Measuring Instrument | Audio level meter |
| Adjustment Element | RV802 |
| Specified Value | − 7.5 ± 0.5 dBs |

Adjustment method:
1) Adjust to − 7.5 ± 0.5 dBs using RV802.

### 3-1. AFM matrix (L − R) adjustment (PC-39 board)

| | |
|---|---|
| Mode | REC |
| Signal | 400 Hz, − 7.5 dBs<br>L, R Common phase signal |
| Measurement Point | IC801 ㊱ pin |
| Measuring Instrument | Audio level meter |
| Adjustment Element | RV953 |
| Specified Value | Less than − 60 dBs |

### 3-2. AFM matrix (L − R) adjustment (PC-39 board)

| | |
|---|---|
| Mode | Playback |
| Signal | Playback WR5-9CS the 400 Hz, − 7.5 dBs L, R common phase signal |
| Measurement Point | IC905 ⑦ pin |
| Measuring Instrument | Audio level meter |
| Adjustment Element | RV952 |
| Specified Value | Less than − 35 dBs |

### 4-1. AFM matrix (L+R) adjustment (PC-39 board)

| | |
|---|---|
| Mode | REC |
| Signal | 400 Hz, − 7.5 dBs<br>L, R Unti-phase signal |
| Measurement Point | IC901 ㊱ pin |
| Measuring Instrument | Audio level meter |
| Adjustment Element | RV951 |
| Specified Value | Less than − 60 dBs |

### 4-2. AFM matrix (L+R) adjustment (PC-39 board)

| | |
|---|---|
| Mode | Playback |
| Signal | Playback WR5-9CS the 400 Hz, − 7.5 dBs L, R unti-phase signal |
| Measurement Point | IC906 ① pin |
| Measuring Instrument | Audio level meter |
| Adjustment Element | RV954 |
| Specified Value | Less than − 35 dBs |

### 5. E-E output level check

| | |
|---|---|
| Mode | E-E |
| Signal | 400 Hz, −7.5 dBs: Audio input (Both L and R channels) |
| Measurement Point | Audio output L [R] |
| Measuring Instrument | Audio level meter |
| Specified Value | − 7.5 ± 3 dBs |

Checking method:
1) Confirm that the audio output L [R] level is − 7.5 ± 3 dBs.

### 6. Overall level characteristics check

| | |
|---|---|
| Mode | Recording (SP mode) |
| Signal | 400 Hz, −7.5 dBs: Audio input (Both L and R channels) |
| Measurement Point | Audio output L or R |
| Measuring Instrument | Audio level meter |
| Specified Value | 7.5 ± 3 dBs |

Checking method:
1) Record the signal.
2) Playback the recorded section.
3) Confirm that the audio output level is −7.5 ± 3 dBs.

### 7. Overall frequency characteristics check

| | |
|---|---|
| Mode | Self-recording and playback |
| Signal | Ⓐ 400 Hz, −20 dBs<br>Ⓑ 30 Hz, −20 dBs<br>Ⓒ 14 kHz, −20 dBs<br>: Audio input (Both L and R channels) |
| Measurement Point | Audio output L or R |
| Measuring Instrument | Audio level meter |
| Specified Value | Confirm that when the 400 Hz playback output level is 0 dB, the 30 Hz and the 14 kHz playback output level is 0 ± 3 dB. |

Checking method:
1) Record signals Ⓐ through Ⓒ in order.
2) Playback the recorded section.
3) Confirm that when the 400 Hz playback output level is 0 dB, the 30 Hz and the 14 kHz playback output level is 0 ± 3 dB.

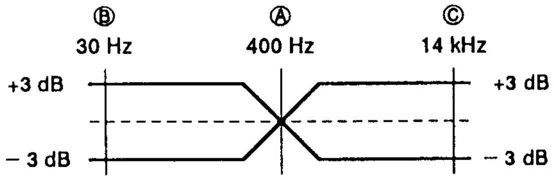


Fig. 9-55. AFM overall frequency response

### 8. Overall distortion check

The specified value for LP mode is shown in [ ].

| | |
|---|---|
| Mode | Self-recording and playback |
| Signal | 400 Hz, −7.5 dBs: Audio input (Both L and R channels) |
| Measurement Point | Audio output L or R |
| Measuring Instrument | Distortion meter |
| Specified Value | Less than 0.5% [1.0%] *1 |

Checking method:
1) Record the signal.
2) Playback the recorded section.
3) Confirm that the distortion is less than 0.5% [1.0%].*1
   *1: Value when the filter for distortion measurement is used (Fig. 8-52.). Distortion should be less than 1.0% [2.0%] when the filter is not used.

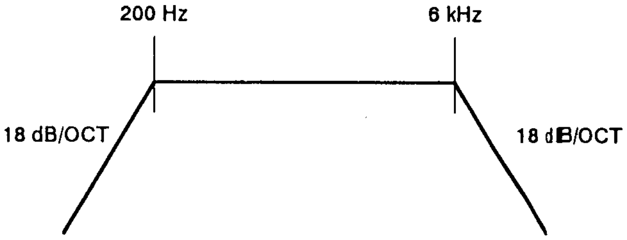


Fig. 9-56. Filter for distortion measurement

### 9. Overall noise level check

| Mode | Self-recording and playback |
|---|---|
| Signal | No signal<br>(Shorting plug inserted into both audio input L and R terminals) |
| Measurement Point | Audio output L or R |
| Measuring Instrument | Audio level meter |
| Specified Value | Less than –62 dBs [*2] |

Checking method:

1) Record the signal.
2) Playback the recorded section.
3) Confirm that the noise level is less than –62 dBs.[*2]

   [*2]: Value when IHF-A hearing compensation filter is used.

## 9-9. TUNER SYSTEM ADJUSTMENT

### 9-9-1. RF AGC Adjustment (IF001 Unit/TU-100 Board)

| Signal | Broadcast TV signal |
|---|---|
| Adjustment element | VR of IF001 unit |

[Adjustment Method]

1) Adjust the monitor TV to a maximum contrast.
2) Turn the VR to make snow noise visible.
3) Turn the VR in an opposite direction and set it to the point where the snow noise disappears.
4) Receive each channel and confirm that there are no beat picture corruption snow noises due to cross modulation.

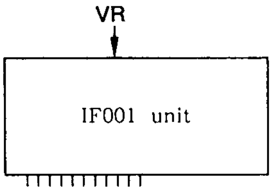


Fig. 8-28.

### 9-9-2. Receive Separation (MPX) Adjustment (TU-100 Board)

| Signal | Stereo (AERIAL IN of RF) Lch : 400 Hz, 100% modulation<br>Rch : No modulation |
|---|---|
| Connection point | Audio line output:<br>L and R channels |
| Measurement equipment | Oscilloscope |
| Adjustment element | RV001 |

**[Setting of The Switch]**

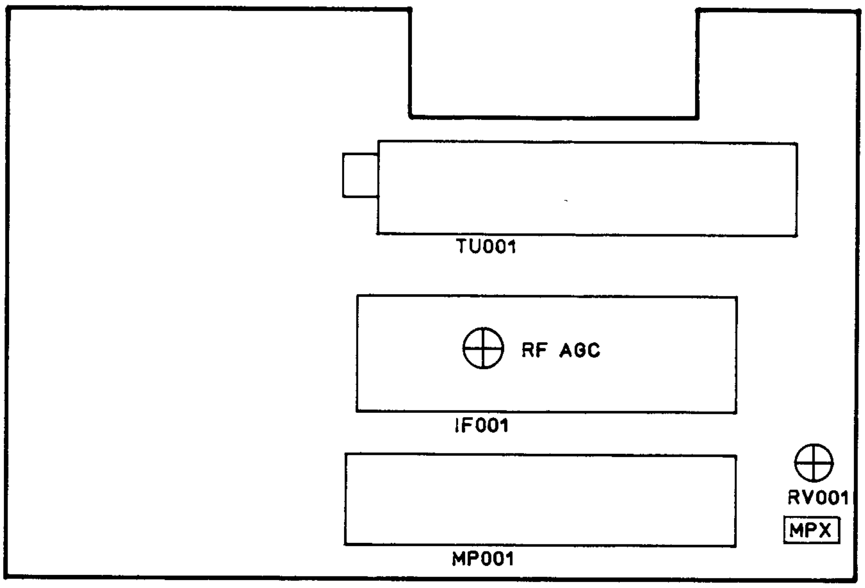
RV101-L (FR-4 board) ··· Center click
RV101-R (FR-4 board) ··· Center click

**[Adjustment Method]**

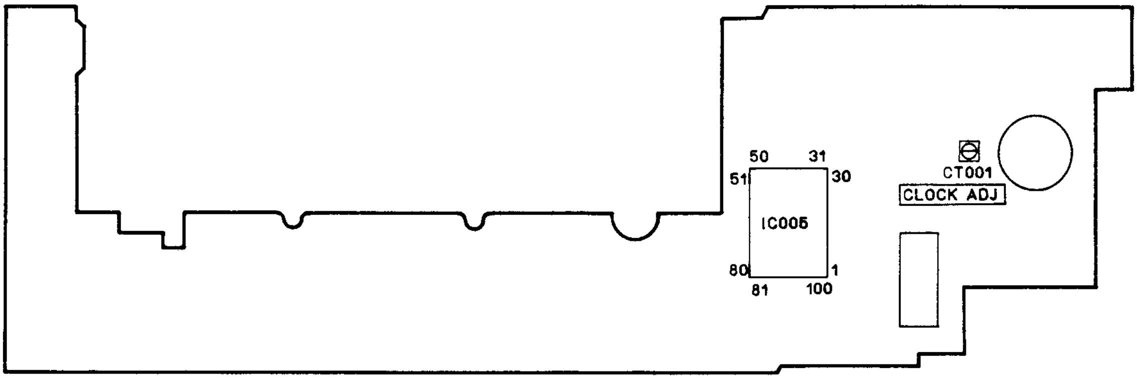
1) Set the sound multiplex signal generator in the Stereo mode, and set only Lch to 400Hz, 100% modulation.
2) Connect the oscilloscope to the Rch of Audio Line Output.
3) Adjust RV001 to minimize Rch output.
   When this is done, do not fully turn RV001.
   (The "STEREO" indicator must be illuminated).

## 9-10. ARRANGEMENT DIAGRAM FOR ADJUSTMENT PARTS

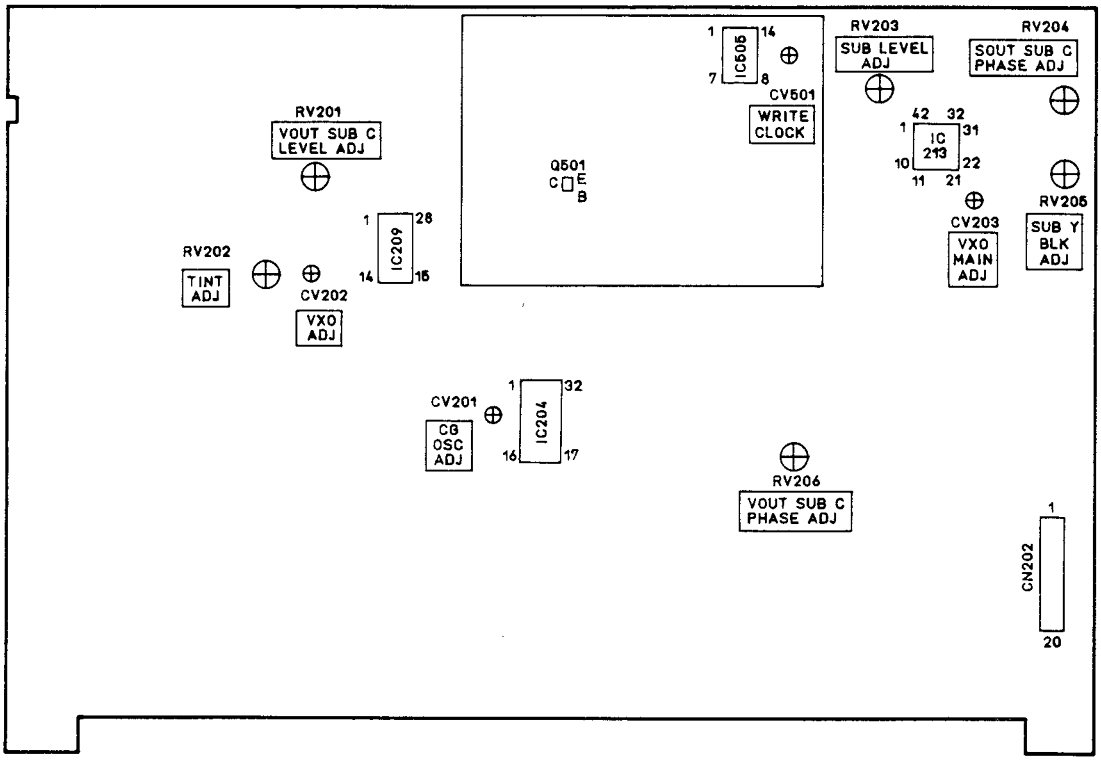
TU-100 BOARD ( COMPONENT SIDE )


TU001
RF AGC
IF001
RV001
MPX
MP001

FL-24 BOARD ( COMPONENT SIDE )

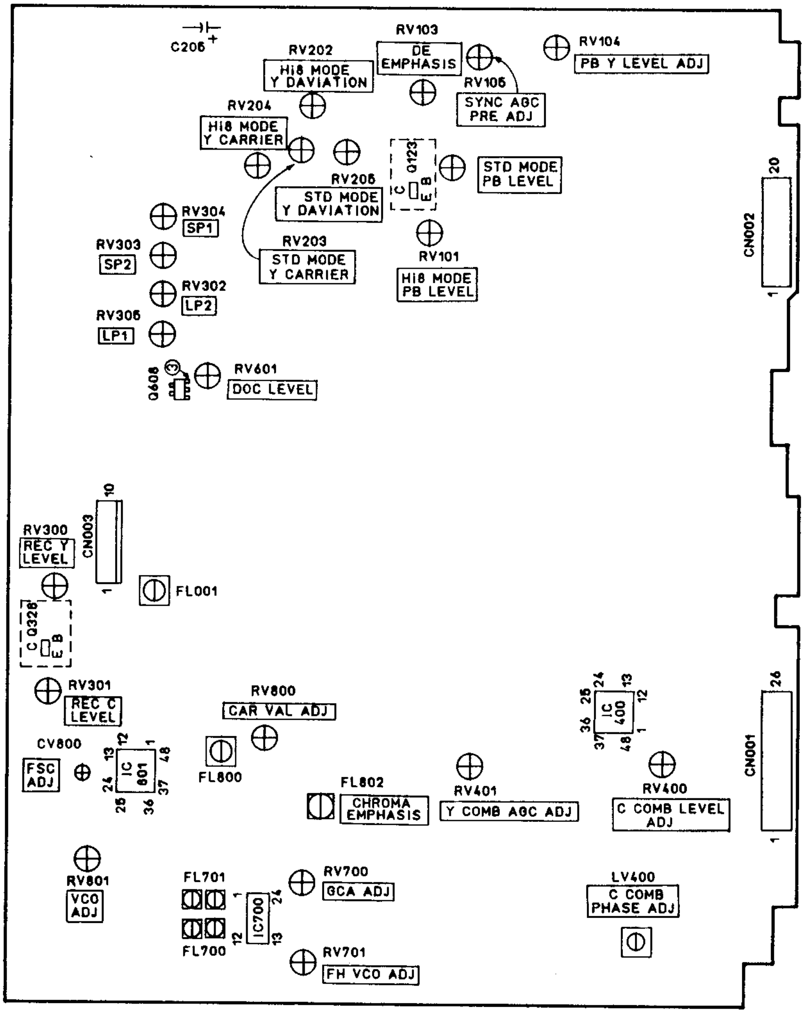

50
31
51
30
IC005
80
1
81
100
CT001
CLOCK ADJ

DS-35 BOARD ( COMPONENT SIDE )



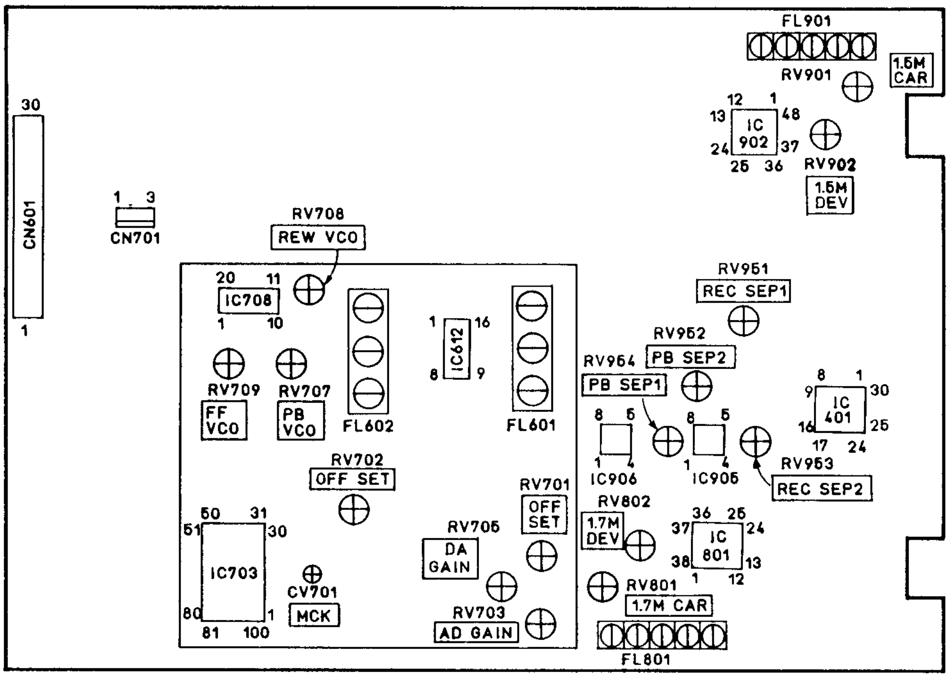
IC505
1
14
7
8
CV501
WRITE CLOCK
RV203
SUB LEVEL ADJ
RV204
SOUT SUB C PHASE ADJ
IC 213
1
42
32
31
10
22
11
21
RV201
VOUT SUB C LEVEL ADJ
Q501
C E B
RV205
SUB Y BLK ADJ
CV203
VXO MAIN ADJ
IC209
1
28
14
15
RV202
TINT ADJ
CV202
VXO ADJ
CV201
CG OSC ADJ
IC204
1
32
16
17
RV206
VOUT SUB C PHASE ADJ
CN202
1
20

VI-65 BOARD ( COMPONENT SIDE )

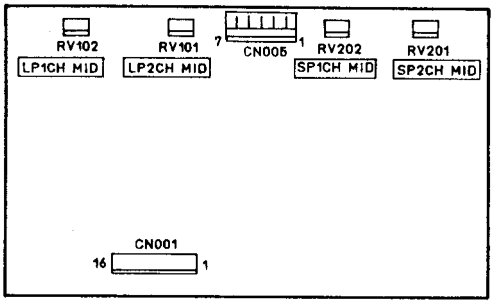


C205
RV202
Hi8 MODE Y DAVIATION
RV103
DE EMPHASIS
RV104
PB Y LEVEL ADJ
RV105
SYNC AGC PRE ADJ
RV204
Hi8 MODE Y CARRIER
Q123
C E B
STD MODE PB LEVEL
RV205
STD MODE Y DAVIATION
RV203
STD MODE Y CARRIER
RV101
Hi8 MODE PB LEVEL
RV304
SP1
RV303
SP2
RV302
LP2
RV305
LP1
Q608
RV601
DOC LEVEL
CN002
20
1
RV300
REC Y LEVEL
CN003
10
1
FL001
Q328
C E B
RV301
REC C LEVEL
RV800
CAR VAL ADJ
IC 400
24
13
25
12
36
1
37
48
CN001
26
1
CV800
FSC ADJ
IC 801
12
1
13
48
24
37
25
36
FL800
FL802
CHROMA EMPHASIS
RV401
Y COMB AGC ADJ
RV400
C COMB LEVEL ADJ
RV801
VCO ADJ
FL701
FL700
IC700
1
24
12
13
RV700
GCA ADJ
RV701
FH VCO ADJ
LV400
C COMB PHASE ADJ

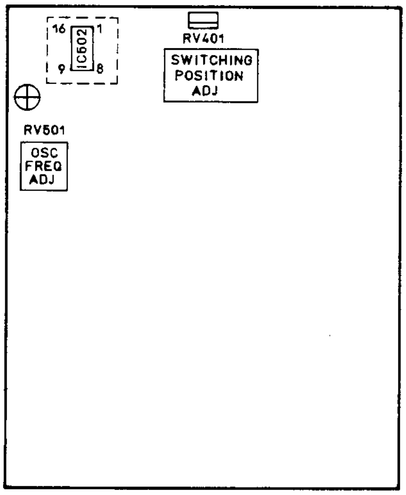
## PC-39 BOARD ( COMPONENT SIDE )


FL901
RV901
1.5M CAR
12 1
13 IC 902 48
24 37
25 36
RV902
1.5M DEV
30
CN601
1
1 3
CN701
RV708
REW VCO
20 11
IC708
1 10
1 16
IC612
8 9
RV709
FF VCO
RV707
PB VCO
FL602
FL601
RV951
REC SEP1
RV952
PB SEP2
RV954
PB SEP1
8 5
1 4
IC906
8 5
1 4
IC905
8 1
9 IC 401 30
16 25
17 24
RV953
REC SEP2
RV702
OFF SET
RV701
OFF SET
50 31
51 30
IC703
80 1
81 100
CV701
MCK
RV705
DA GAIN
RV703
AD GAIN
RV802
1.7M DEV
36 25
37 IC 801 24
38 13
1 12
RV801
1.7M CAR
FL801

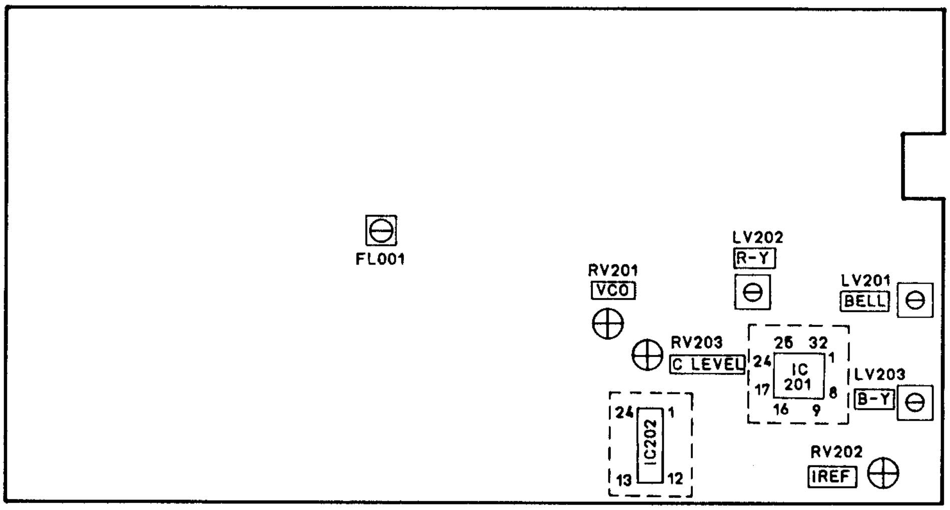
## RP-74 BOARD ( COMPONENT SIDE )


RV102
LP1CH MID
RV101
LP2CH MID
7 CN005 1
RV202
SP1CH MID
RV201
SP2CH MID
CN001
16 1

## CM-15 BOARD ( COMPONENT SIDE )


16 1
IC502
9 8
RV401
SWITCHING POSITION ADJ
RV501
OSC FREQ ADJ

## YC-64 BOARD ( COMPONENT SIDE )

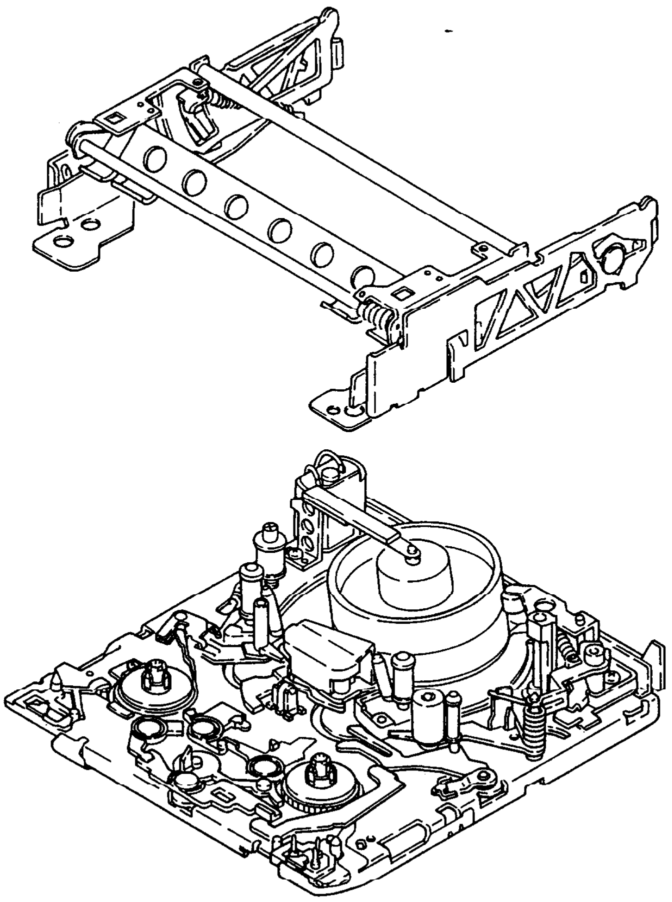

FL001
RV201
VCO
LV202
R-Y
LV201
BELL
RV203
C LEVEL
25 32
24 IC 201 1
17 8
16 9
LV203
B-Y
24 1
IC202
13 12
RV202
IREF

# mm Video MECHANICAL ADJUSTMENT MANUAL III

## U MECHANISM

**Video 8**

Please use in conjunction with the SERVICE MANUAL.



**8 MECHANISM DECK**

**SONY®**

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# 1. PREPARATIONS FOR MECHANICAL BLOCK CHECK, ADJUSTMENT AND REPLACEMENT

**Note:** For removal of the cabinet, the boards, the cassette compartment, etc., refer to the service guides.

## 1-1. OPERATION WITHOUT CASSETTE COMPARTMENT ASSEMBLY AND TAPE

**Note:** The unit will not work if exposed to a strong light.

### 1-1-1. How to Trigger the Loading Operation (See Fig. 1-1.)

1) Supply power to the unit after removing the cabinet, the camera block, the cassette compartment assembly, etc., as indicated in the service guides. (This will enable operation of the mechanical deck.)
2) Cover the LED assembly with an opaque cap, etc. ❶.
3) Attach a piece of tape to the RECOG switch ❷ so that the pin is held down.
4) Push the EJECT lever ❸ in the direction of the arrow 🅐.

### 1-1-2. Setting the Playback Mode (See Fig. 1-1.)

1) Follow the procedures in section 1-1-1. above.
2) Put the rubber band ❹ around the S and T reels.
3) Press the PLAY switch of unit, then push the tension regulator arm assembly ❺ in the direction of the arrow 🅑 when the T reel starts to rotate (the tension regulator band will be released, and the S reel will start rotating).
4) To stop operation, press the STOP switch.

### 1-1-3. Eject Operation (See Fig. 1-1.)

1) To eject, turn the EJECT switch on.

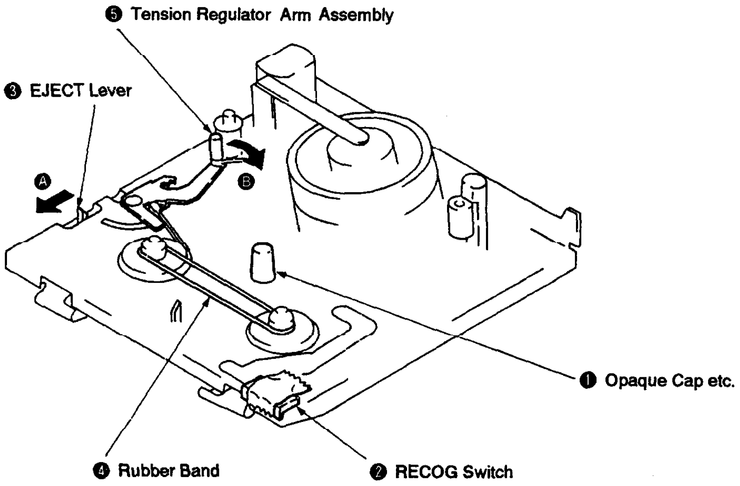


Fig. 1-1.

## 1-2. THE MODE SELECTOR

### 1-2-1. Name of Each Part (external) (See Fig. 1-2.)

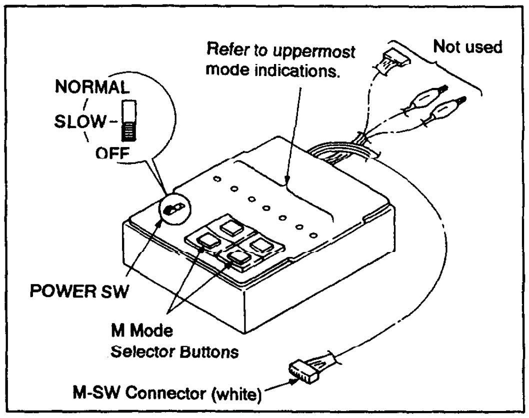

Refer to uppermost mode indications.
Not used
NORMAL
SLOW
OFF
POWER SW
M Mode Selector Buttons
M-SW Connector (white)

Fig. 1-2.

### 1-2-2. Connections (See Fig. 1-3.)

1) Mount the MODE SELECTOR III panel (Ref. No. J-9) ❶ onto the mode selector.
2) Attach the conversion connector (Ref. No. J-8) ❸ of MODE SELECTOR III to the 6-pin connector (white) ❷ of the mode selector M-SW.
3) Remove the FP-89 flexible board ❺ from the flexible connector ❹.
4) Attach the FP-89 flexible board ❺ to the flexible connector ❻ of the MODE SELECTOR III conversion connector ❸, then attach the 2-pin connector (white) ❽ of the loading motor to the 2-pin connector (white) ❼.

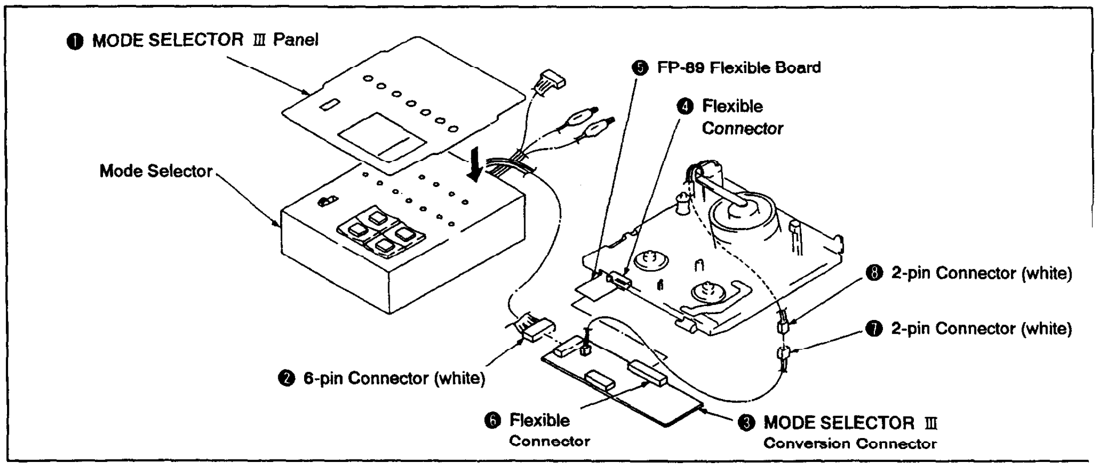

❶ MODE SELECTOR Ⅲ Panel
Mode Selector
❺ FP-89 Flexible Board
❹ Flexible Connector
❽ 2-pin Connector (white)
❼ 2-pin Connector (white)
❷ 6-pin Connector (white)
❻ Flexible Connector
❸ MODE SELECTOR Ⅲ Conversion Connector

Fig. 1-3.

### 1-2-3. Handling (See Figs. 1-2. and 1-4.)

- Use only the M mode selector buttons.
- Refer to mode indications on the uppermost part of the MODE SELECTOR III panel.
- If the right M mode selector button is kept pressed, the lit indication will change in the order of EJECT → (IA) → ULD → (IB) → STOP → (IC) → FWD.
- To change modes in the reverse direction (from FWD to EJECT), press the left selector button.

**Note:** For this U mechanism, the uppermost indicators on the MODE SELECTOR III panel are used. The IA, IB and IC indications light up during mode changes.

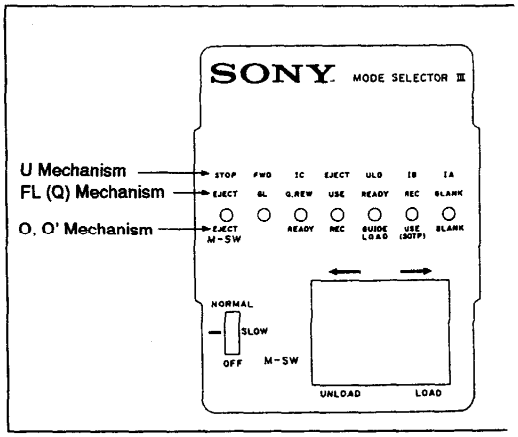

SONY MODE SELECTOR Ⅲ
U Mechanism
FL (Q) Mechanism
O, O' Mechanism
STOP
FWD
IC
EJECT
ULD
IB
IA
EJECT
GL
Q.REW
USE
READY
REC
BLANK
EJECT
M-SW
READY
REC
GUIDE LOAD
USE (SOTP)
BLANK
NORMAL
SLOW
OFF
M-SW
UNLOAD
LOAD

Fig. 1-4.

## 2. PERIODICAL CHECK AND MAINTENANCE (See Fig. 2-1.)

The following periodical check and maintenance procedures are necessary to ensure proper operation and to protect the tapes as well as the unit, and the following maintenance procedures must be always carried out after repairing regardless of how long the unit has been used.

### 2-1. ROTARY DRUM ASSEMBLY CLEANING

1) While pressing a piece of chamois leather (Ref. No. J-2) moistened in cleaning fluid (Ref. No. J-1) lightly against the rotary drum, turn the rotary upper drum slowly counter-clockwise with your fingers.

**Note:** Do not drive the drum with the motor, and do not turn it clockwise.
Do not move the chamois leather vertically against the head tip; this can damage the head tip. Strictly follow the cleaning instructions above.

### 2-2. TAPE PATH CLEANING

1) Set the cassette compartment assembly to the eject state, or remove it. Then clean the tape path (guides No. 1 to 7, capstan shaft, pinch rollers) with a piece of chamois leather moistened in cleaning fluid (See Fig. 2-1).

### 2-3. DRIVE SYSTEM CLEANING

1) Clean the drive system (timing belt, reel table surface) with a piece of cloth moistened in cleaning fluid.

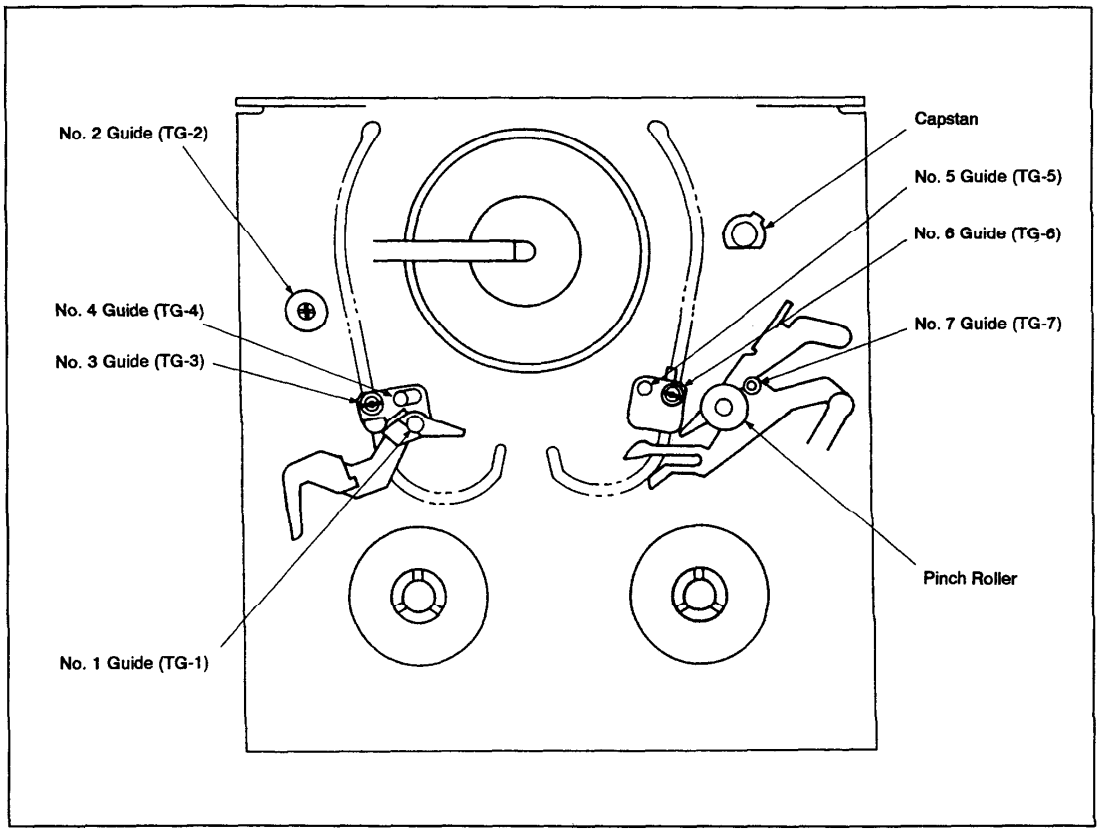


Fig. 2-1.

## 2-4. PERIODICAL CHECK ITEMS

○Cleaning ◎Lubrication ☆Check

| Maintenance and Check Item | | Operation time (H) | | | | | | | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 500 | 1,000 | 1,500 | 2,000 | 2,500 | 3,000 | 3,500 | 4,000 | 4,500 | 5,000 | |
| Cleaning and Demagnetizing | Tape path surfaces Cleaning | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Do not oil. |
| | Rotary drum assembly cleaning and demagnetizing | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ | Do not oil. |
| Drive System | Relay belt (short) | – | ☆ | – | ☆ | – | ☆ | – | ☆ | – | ☆ | 3-728-866-01 |
| | Relay belt (long) | – | ☆ | – | ☆ | – | ☆ | – | ☆ | – | ☆ | 3-728-865-01 |
| | Capstan shaft | – | ◎ | – | ◎ | – | ◎ | – | ◎ | – | ◎ | Take care that no oil gets on tape path surfaces. |
| | Idler pulley axle | – | ◎ | – | ◎ | – | ◎ | – | ◎ | – | ◎ | |
| | Loading motor | – | ☆ | – | ☆ | – | ☆ | – | ☆ | – | ☆ | 1-541-612-11 |
| Performance Check | Abnormal noise | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | ☆ | |
| | Back tension measurement | – | ☆ | – | ☆ | – | ☆ | – | ☆ | – | ☆ | |
| | Brake system | – | ☆ | – | ☆ | – | ☆ | – | ☆ | – | ☆ | |
| | FWD, RVS torque measurement | – | ☆ | – | ☆ | – | ☆ | – | ☆ | – | ☆ | |

**Notes:** When overhauling the unit, perform parts replacement referring to the table above.

Regarding Oil:

- Always use the specified oil (using oil of different viscosity, etc. can cause troubles of several kinds).
  Specified oil: Part No. 7-661-018-01
  (Mitsubishi Diamond Oil Hydrofluid EP56)
- Be sure that no dirt is mixed in the oil to be used on axle bearings. Use of dirty oil can result in bearing wear and burning.
- By "one drop of oil" is meant the quantity of oil adhering to the end of a a 2mm-diameter rod as shown in Fig. 2-2.

On grease:

- Use the specified grease.
  Grease: Part No. 7-662-010-08
  (Sony grease SGL-701)

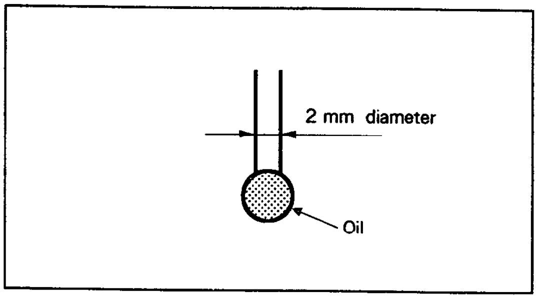


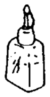
Fig. 2-2.

## 2-5. SERVICING TOOLS

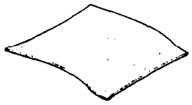
| Ref. No. | Name | Part Code | Marking | Application, etc. |
|---|---|---|---|---|
| J-1 | Cleaning fluid | Y-2031-001-0 | – | |
| J-2 | Chamois cloth | 2-034-697-00 | – | |
| J-3 | Head demagnetizer | Commercially available | – | |
| J-4 | Dental mirror<br>Spare mirror | J-6080-029-A<br>J-6080-030-1 | SL-5052 | Tape path |
| J-5 | Alignment tape NTSC (WR5-1N)<br>PAL (WR5-1C) | 8-967-995-01<br>8-967-995-06 | | Tape path |
| J-6 | FWD/RVS takeup torque cassette | J-6080-624-A | GD-2086 | |
| J-7 | Rotary drum jig | (Attached to the maintenance rotary upper drum) | | |
| J-8 | Mode selector III conversion connector | J-6082-021-A | | General |
| J-9 | Mode selector III panel | J-6082-023-A | | General |
| J-10 | Mode selector | J-6080-825-A | | General |
| J-11 | Hexagonal wrench detection (0.89 mm)<br>or L wrench (0.89 mm) | 7-700-766-01<br>7-700-736-06 | | Tape path |
| J-12 | Sony grease (SGL-701) | 7-662-010-08 | | |

Other devices: Oscilloscope
Analog tester (20 kΩ )

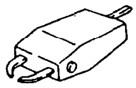
J-1



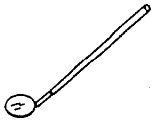
J-2



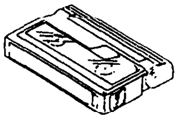
J-3



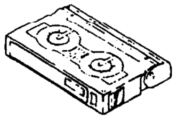
J-4



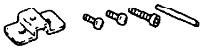
J-5



J-6

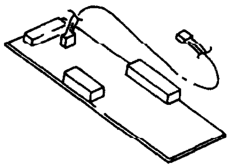


J-7

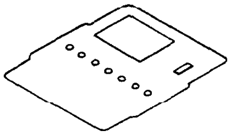


(Attached to the maintenance rotary upper drum)

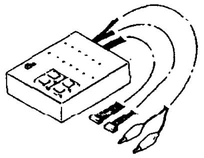
J-8



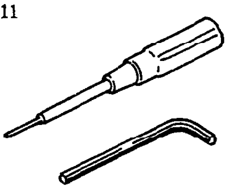
J-9



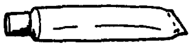
J-10



J-11



J-12



# 3. MECHANICAL BLOCK CHECK, ADJUSTMENT AND REPLACEMENT

**Notes:**
- Use the mode selector (Ref. No. J-10) for procedures in this chapter.
- Modes within a frame ☐ are those set by pressing the buttons of the mode selector.

## 3-1. HC ROLLER ASSEMBLY

### 1. Removal (See Fig. 3-1.)

1) Remove the screw ❶, then remove the HC roller assembly ❷.

### 2. Installation (See Fig. 3-1.)

1) Align the two dowels ❸ attached to the HC roller assembly ❷ with the two holes ❹ in the mechanism chassis.
2) Secure the HC roller assembly ❷ with the screw ❶.

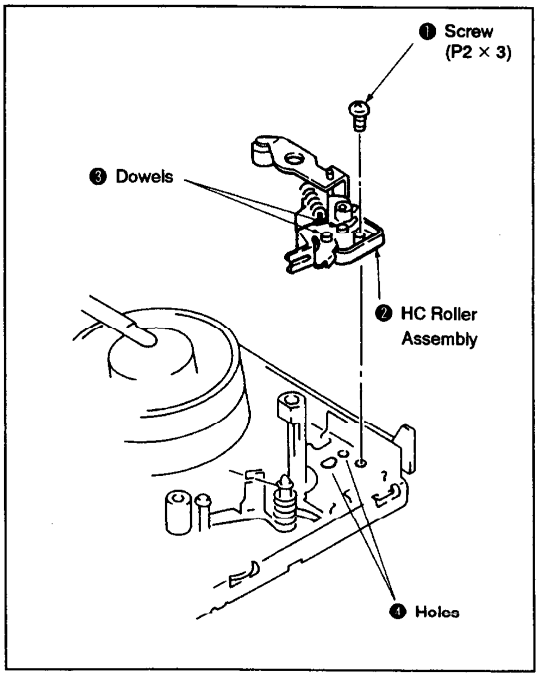

❶ Screw (P2 × 3)
❸ Dowels
❷ HC Roller Assembly
❹ Holes

Fig. 3-1.

## 3-2. GUIDE GUARD ASSEMBLY

### 1. Removal (See Fig. 3-2.)

Remove the screw ❶, then remove the guide guard assembly ❷.

### 2. Installation (See Fig. 3-2.)

1) Align the dowel ❸ attached to the guide guard assembly ❷ with the hole ❹.
2) Secure the guide guard assembly ❷ with the screw ❶.

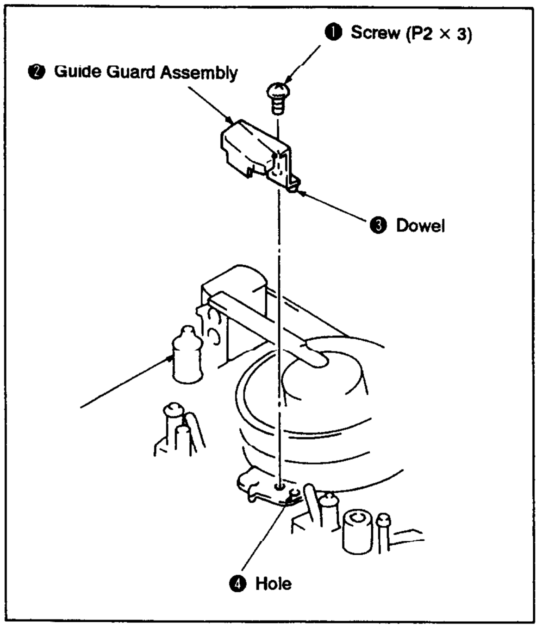

❶ Screw (P2 × 3)
❷ Guide Guard Assembly
❸ Dowel
❹ Hole

Fig. 3-2.

## 3-3. DC MOTOR (CAPSTAN MOTOR) ASSEMBLY

### 1. Removal (See Fig. 3-3.)

1) Set the ULD mode.
2) Turn the stopper ❶ in the direction of the arrow Ⓐ as far as it will go.
3) Remove the two screws ❷, then remove the DC motor ❸.

### 2. Installation (See Fig. 3-3.)

1) Align the two screwed dowels ❹ with the two holes ❺, then engage the toothed part ❻ with the connecting gear ❼.
2) Secure the DC motor assembly ❸ with the two screws ❷.
3) Turn the stopper ❶ in the direction of the arrow Ⓑ as far as it will go.

**Note:**
- When engaging the gears, take care not to damage their teeth.
- Do not leave any clearance between the DC motor ❸ and the chassis.
- Do not touch the capstan motor axle*, the oil seal* and the rotor*.

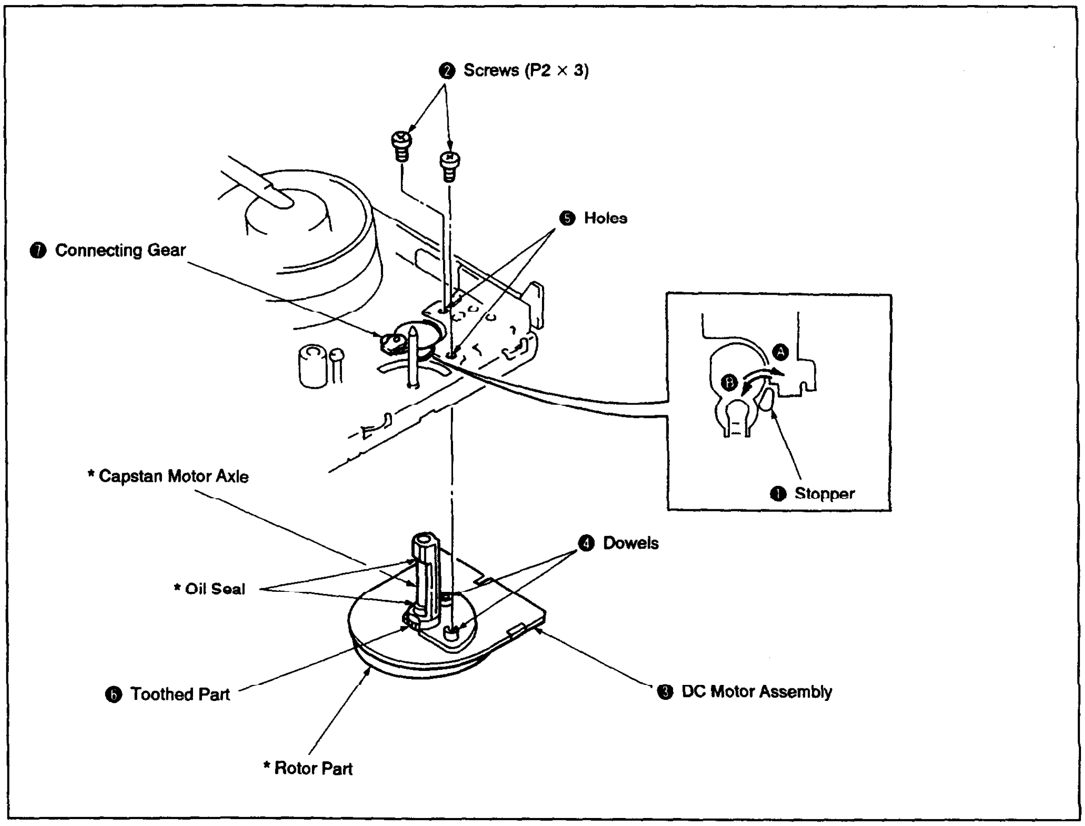

❷ Screws (P2 × 3)
❺ Holes
❼ Connecting Gear
Ⓐ
Ⓑ
❶ Stopper
* Capstan Motor Axle
❹ Dowels
* Oil Seal
❻ Toothed Part
❸ DC Motor Assembly
* Rotor Part

Fig. 3-3.

## 3-4. S BRAKE, T BRAKE

### 1. Removal (See Fig. 3-4.)

1) Remove the torsion coil spring (ST) ❶.
2) Remove the axle holding pin ❷, then remove the T brake ❸.
3) Remove the axle holding pin ❹, then remove the S brake ❺.

### 2. Installation (See Fig. 3-4.)

1) While fitting the toothed part ❻ into the notch ❼, mount the S brake ❺.
2) Insert the axle holding pin ❹.
3) Insert the axle ❽ to the S reel side of the brake release arm ❾ so that the Ⓐ part comes closer to the drum than part Ⓑ, and mount the T brake ❸.
4) Insert the axle holding pin ❷.
5) Insert the torsion coil spring (ST) ❶ below the claw ⓫ of the axle ❿, then hook it to two claws ⓬.

**Note:** Confirm that the claws of axle holding pins ❷ and ❹ are not broken before assembling.

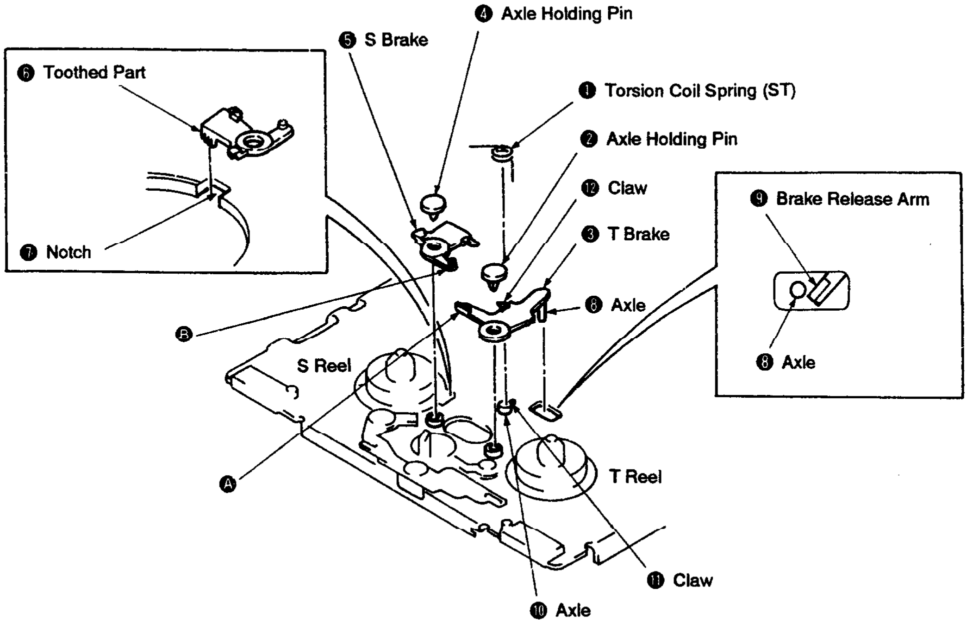

❹ Axle Holding Pin
❺ S Brake
❻ Toothed Part
❶ Torsion Coil Spring (ST)
❷ Axle Holding Pin
⓬ Claw
❾ Brake Release Arm
❸ T Brake
❼ Notch
❽ Axle
Ⓑ
S Reel
❽ Axle
Ⓐ
T Reel
⓫ Claw
❿ Axle

Fig. 3-4.

## 3-5. LB BRAKE, AXLE HOLDING PINS

### 1. Removal (See Fig. 3-5.)

1) Remove the screw ❶, then remove the TL holding plate ❷.
2) Remove the axle holding pin ❸, then remove the LB brake ❹.
3) Remove the axle holding pin ❺, then remove the LB lever ❻.

### 2. Installation (See Fig. 3-5.)

1) Mount the LB lever ❻ matching it to pin ❼ of the LB gear, then secure it with the axle holding pin ❺.
2) Insert the pin ❽ into the notch ❾ of the LB lever ❻, then mount the LB brake ❹ while inserting the toothed part ❿ into the notch ⓫.
3) Insert the axle holding pin ❸.
4) Align the dowel ⓬ with the hole ⓭, then mount the TL holding plate and secure it with the screw ❶.

**Note**: Confirm that the claws of axle holding pins ❸ and ❺ are not broken before assembling.

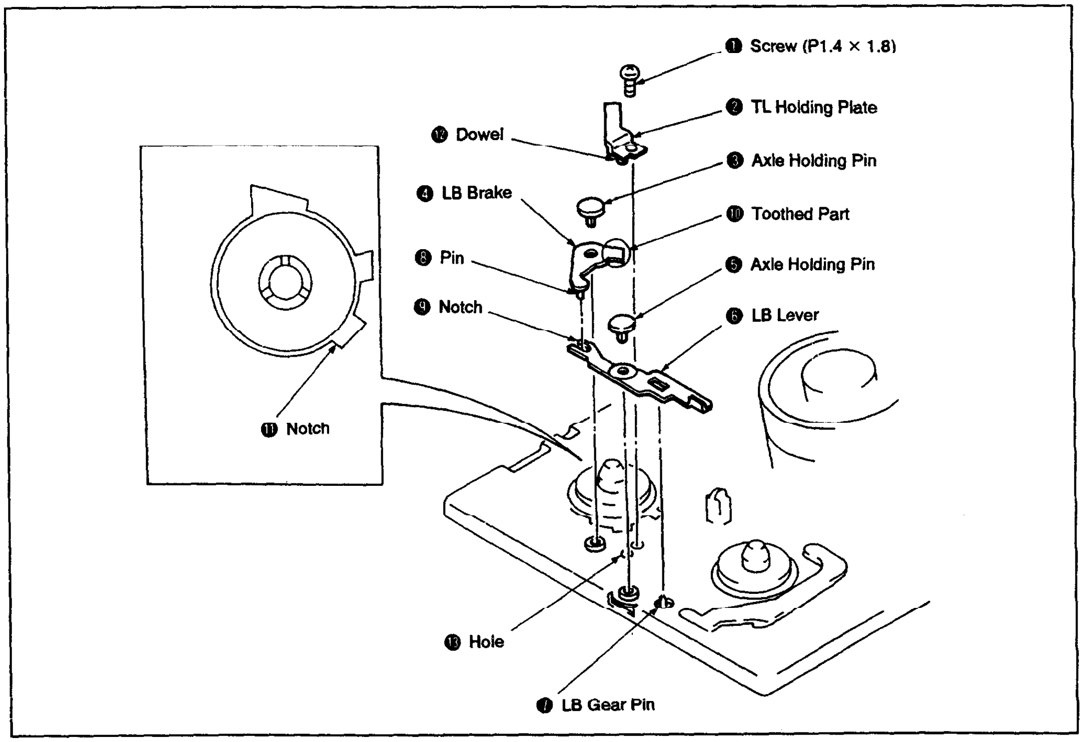

❶ Screw (P1.4 × 1.8)
❷ TL Holding Plate
⓬ Dowel
❸ Axle Holding Pin
❹ LB Brake
❿ Toothed Part
❽ Pin
❺ Axle Holding Pin
❾ Notch
❻ LB Lever
⓫ Notch
⓭ Hole
❼ LB Gear Pin

Fig. 3-5.

## 3-6. LB RELEASE ARM

### 1. Removal (See Fig. 3-6.)

1) While pushing the claw ❶ in the direction of the arrow, remove the LB release arm ❷.

### 2. Installation (See Fig. 3-6.)

1) Fit the LB release arm ❷ to the axle ❸, insert protrusions ⓐ, ⓑ, ⓒ, ⓓ into the three holes ❹, then secure with the claw ❶.

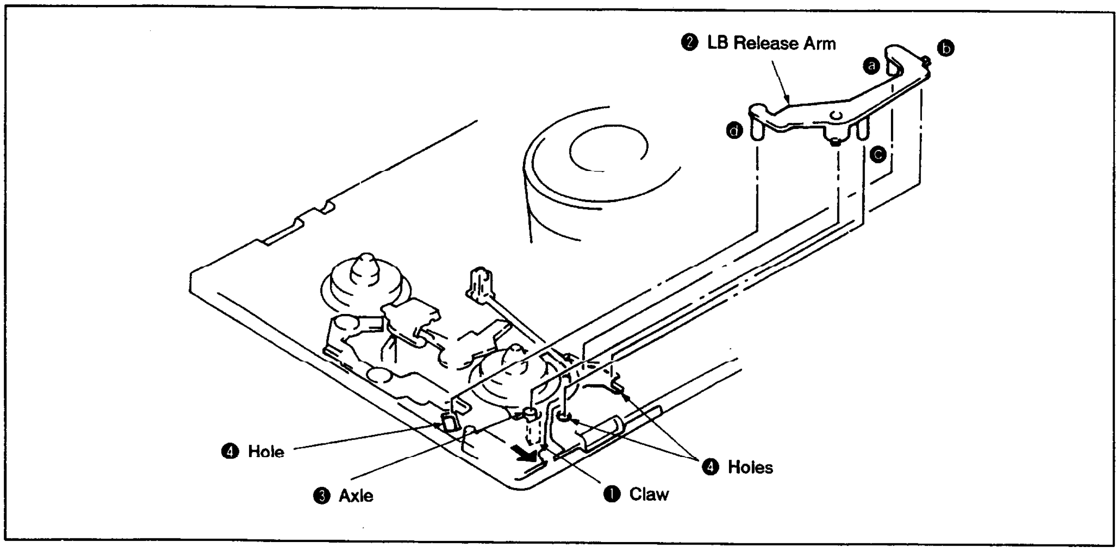

❷ LB Release Arm
ⓑ
ⓐ
ⓓ
ⓒ
❹ Hole
❹ Holes
❸ Axle
❶ Claw

Fig. 3-6.

## 3-7. RK STOPPER, RK STOPPER ARMS

### 1. Removal (See Fig, 3-7.)

1) Remove the torsion coil spring (RK) ❶.
2) Open the chassis claw ❷, then remove the RK stopper arm ❸.
3) Remove the RK stopper ❹.

### 2. Installation (See Fig. 3-7.)

1) Mount the RK stopper ❹ onto the axle ❺.
2) Mount the RK stopper arm ❸ onto the axle ❻, insert Pin ❿ into hole ⓫, then hook the claw ❼ of the chassis to the hole ❼.
3) Insert the torsion coil spring (RK) ❶ into the axle ❺, then hook it to claws ❽ and ❾.

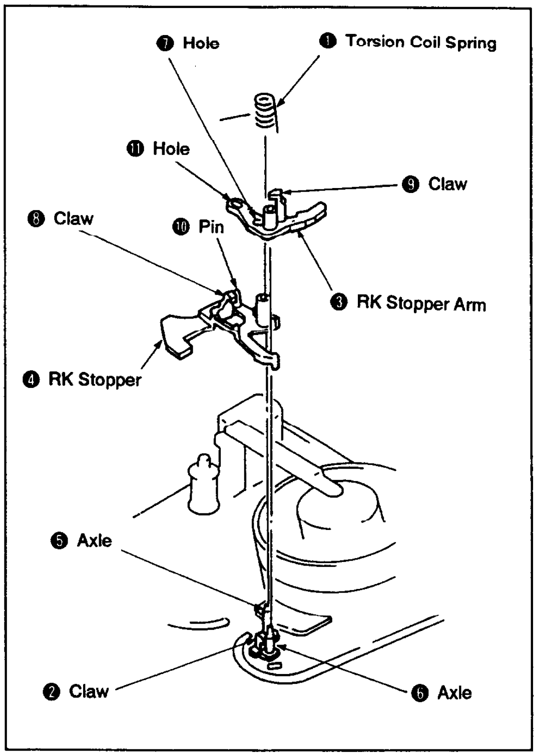

❼ Hole
❶ Torsion Coil Spring
⓫ Hole
❾ Claw
❽ Claw
❿ Pin
❸ RK Stopper Arm
❹ RK Stopper
❺ Axle
❷ Claw
❻ Axle

Fig. 3-7.

## 3-8. PINCH ARM ASSEMBLY, TG-7 ASSEMBLY

### 1. Removal (See Fig. 3-8.)

1) Set the $\boxed{\text{IB}}$ mode.
2) Remove the stopper washer ❶, then remove the pinch arm assembly ❷.
3) Bend the claw ❹ inside hole ❸ in the direction of the arrow using a thin screwdriver or the like, then remove the TG-7 plate spring ❺.
4) Remove the TG-7 arm assembly ❻.

### 2. Installation (See Fig. 3-8.)

1) Grease the inner surfaces of hole ❼ (See Fig. A).
2) Insert the axle ❽ of the TG-7 arm assembly ❻ into the hole ❼.
3) Grease the shaded section ⓐ (See Fig. A).
4) Insert the TG-7 plate spring ❺ into the hole ❸, then secure it with the claw ❹.
5) Apply half a drop of oil to the axle ❾ (See Fig. B).
6) Fit the pinch arm assembly ❷ to the axle ❾ and insert the pinch roller sub arm assembly tab ❿ into the ⓑ part.
7) Install the stopper washer ❶.

**Note:**
- Take care not to grease the screw ⓫ of the TG-7 arm assembly ❻ (See Fig. A).
- When fitting the pinch arm assembly ❷ to the axle ❾, make sure that it does not touch the TG-7 guide ⓬ or the rubber roller ⓭.
- After assembling, be sure to perform tape path adjustment as described in section 4.

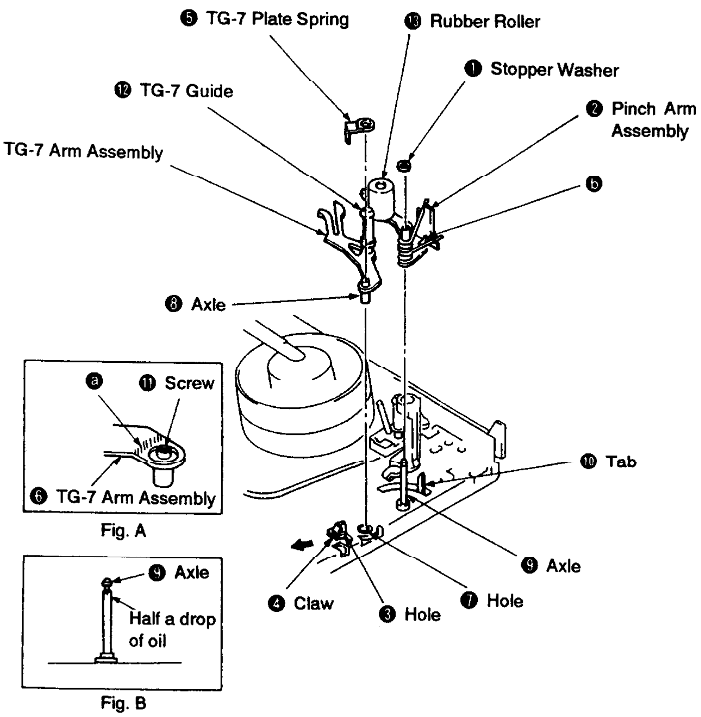

❺ TG-7 Plate Spring
⓭ Rubber Roller
❶ Stopper Washer
⓬ TG-7 Guide
❷ Pinch Arm Assembly
❻ TG-7 Arm Assembly
ⓑ
❽ Axle
ⓐ
⓫ Screw
❻ TG-7 Arm Assembly
❿ Tab
❾ Axle
Half a drop of oil
❾ Axle
❹ Claw
❸ Hole
❼ Hole

Fig. A

Fig. B

Fig. 3-8.

## 3-9. TG-2 ASSEMBLY

### 1. Removal (See Fig. 3-9.)

1) Remove the TG-2 upper flange assembly ❶.
2) Remove the TG-2 roller ❷, the TG-2 sleeve ❸, the TG-2 lower flange ❹ and the compression spring ❺.

### 2. Installation (See Fig. 3-9.)

1) Mount the compression spring ❺, the TG-2 lower flange ❹, the TG-2 sleeve ❸ and the TG-2 roller ❷ to the axle.
2) Secure the TG-2 upper flange ❶ to the axle by rotating it 4 to 6 turns.

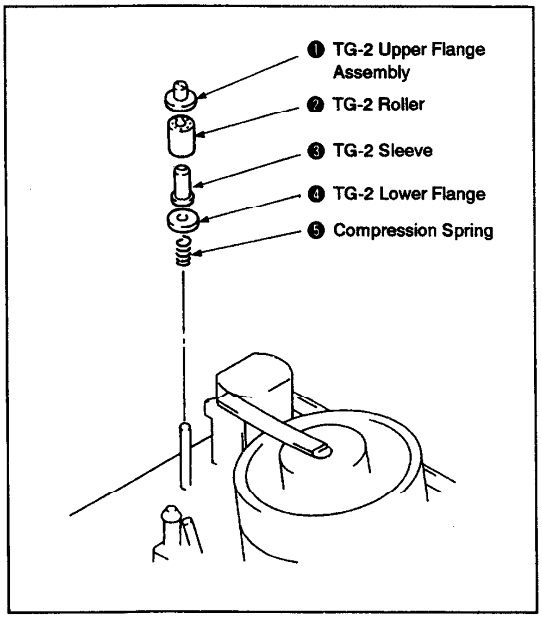

❶ TG-2 Upper Flange Assembly
❷ TG-2 Roller
❸ TG-2 Sleeve
❹ TG-2 Lower Flange
❺ Compression Spring

Fig. 3-9.

### 3. TG-2 Height Preset (see Fig. 3-10.)

1) Adjust height from the mechanism chassis upper surface to the TG-2 upper flange ❶ upper surface to 18.6 mm by turning the TG-2 upper flange ❶.

**Note:** After adjustment, be sure to perform tape path adjustment as described in section 4.

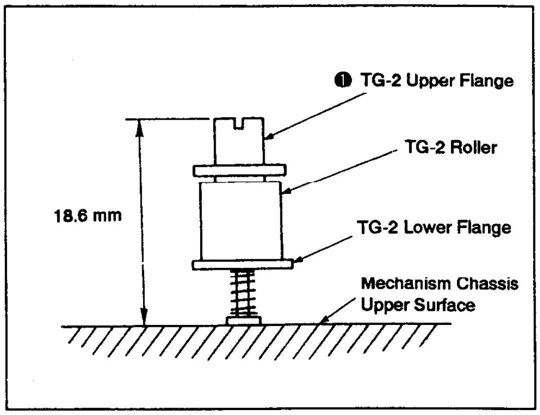

❶ TG-2 Upper Flange
TG-2 Roller
18.6 mm
TG-2 Lower Flange
Mechanism Chassis Upper Surface

Fig. 3-10.

## 3-10. S REEL TABLE ASSEMBLY, T REEL TABLE ASSEMBLY

### 1. Removal (See Fig. 3-11.)

1) Remove the S brake and T brake as described in section 3-4.
2) Remove the TL holding plate as described in section 3-5.
3) Remove the tension regulator band assembly as described in section 3-11.
4) Remove the S reel table assembly ❶.
5) Turn the stopper ❷ approx. 90 ° in the direction of the arrow Ⓐ.
6) While sliding the LB release arm ❸ in the direction of the arrow Ⓑ, remove the T reel table assembly ❹.

### 2. Installation (See Fig. 3-11.)

1) Apply half a drop of oil to the axle ❺ (See Fig. A).
2) Move the RK gear ❻ in the direction of the arrow Ⓒ and the TS brake ❼ in the direction of the arrow Ⓓ, putting them out of the way.
3) While sliding the LB release arm ❸ in the direction of the arrow Ⓑ, mount the T reel table assembly ❹ onto the axle ❺, then turn the stopper ❷ in the direction of the arrow Ⓔ as far as it will go.
4) Apply half a drop of oil to the axle ❽ (See Fig. B).
5) Move the RK gear ❻ in the direction of the arrow Ⓕ, the UL brake ❾ in the direction of the arrow Ⓖ and the LB brake ❿ in the direction of the arrow Ⓗ, putting them out of the way.
6) Mount the S reel table ❶ onto the axle ❽.
7) Mount the tension regulator band assembly as described in section 3-11.
8) Mount the TL holding plate as described in section 3-5.
9) Mount the S brake and T brake assemblies as described in section 3-4.

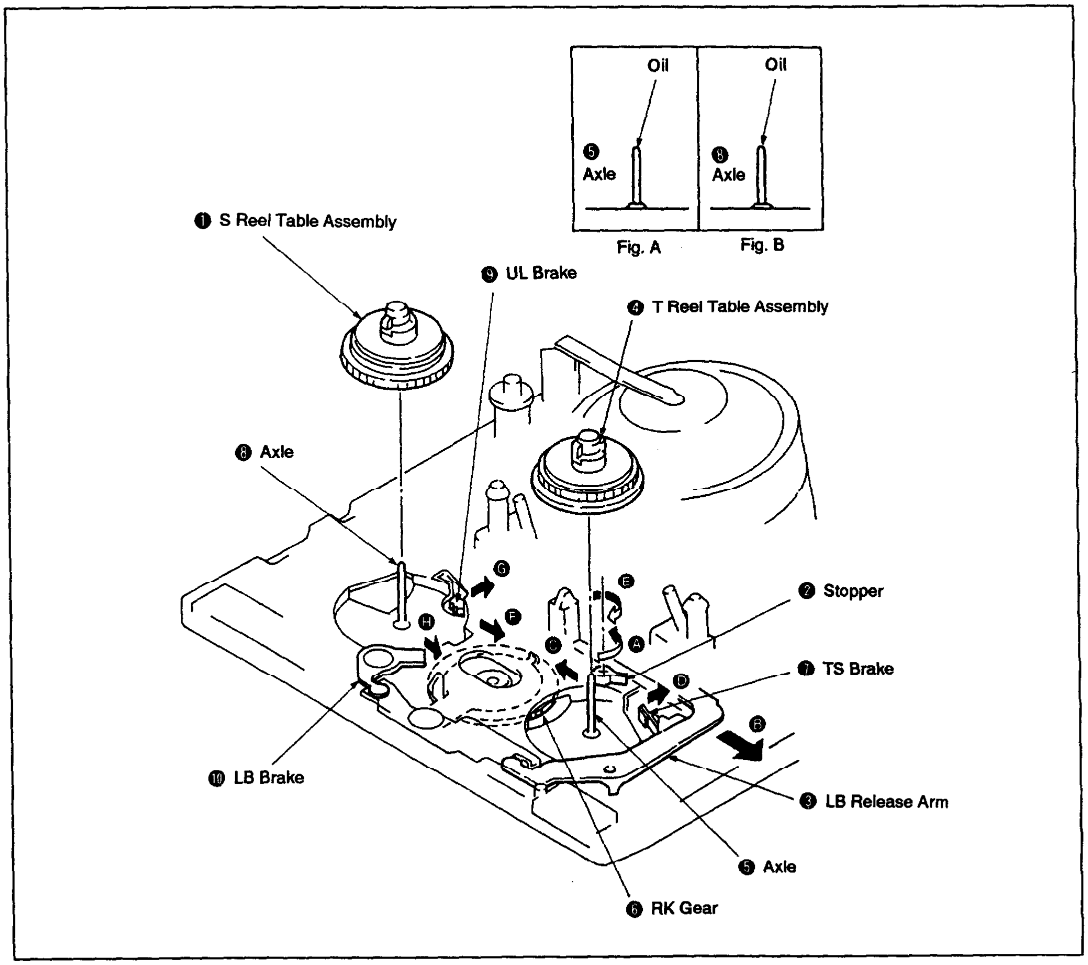

Oil
Oil
❺ Axle
❽ Axle
Fig. A
Fig. B
❶ S Reel Table Assembly
❾ UL Brake
❹ T Reel Table Assembly
❽ Axle
Ⓖ
Ⓔ
Ⓕ
Ⓗ
Ⓒ
Ⓐ
Ⓓ
Ⓑ
❷ Stopper
❼ TS Brake
❿ LB Brake
❸ LB Release Arm
❺ Axle
❻ RK Gear

Fig. 3-11.

## 3-11. TENSION REGULATOR BAND ASSEMBLY, TENSION REGULATOR ARM ASSEMBLY

### 1. Removal (See Fig. 3-12.)

1) Remove the TL holding plate as described in section 3-5.
2) Remove the screw ❶.
3) Using a thin screwdriver or the like, remove the tension regulator band assembly ❹ from the axle ❸ of tension regulator arm assembly ❷.
4) Remove the tension spring ❺.
5) Remove the stopper washer ❻ from the back of the mechanism chassis, then remove the tension regulator arm assembly ❷.
6) Open the claw ❼, then remove the adjust arm ❽.

**Note:** When removing the tension regulator band assembly ❹, take care not to twist or bend it, and not to touch the felt surface ❾.

### 2. Installation (See Fig. 3-12.)

1) Engage the adjust arm ❽ in the position shown in Fig. A, then close the claw ❼.
2) Apply half a drop of oil to the hole ❿.
3) Mount the tension regulator arm assembly ❷, then insert it into the slot ⓫ so that the ⓐ part comes to the arrow Ⓐ side of the switch lever assembly (See Fig. B).
4) While holding the tension regulator arm assembly ❷ from the mechanism chassis front, secure it with the stopper washer ❻ from the back.
5) Hook the R hook of the tension spring ❻ to the adjust arm ❽ as shown in the figure, then hook the opposite end to the tension regulator arm assembly ❷.
6) Mount the tension regulator band assembly ❹ onto the axle ❸ of tension regulator arm assembly ❷, and place it so that the felt surface ❾ comes against the shaded portion of the S reel table assembly ⓬.
7) Mount the tension regulator plate ⓭ of the tension regulator band assembly ❹ so that it is aligned with the dowel ⓮ of the mechanism chassis, then secure it temporarily with the screw ❶.
8) Mount the TL holding plate as described in section 3-5.
9) Adjust tension regulator FWD position as described in section 3-12.
10) Perform adjust arm adjustment as described in section 3-22.

**Note:** When mounting the tension regulator band assembly ❷, take care not to twist or bend it, and not to touch the felt surface ❾.

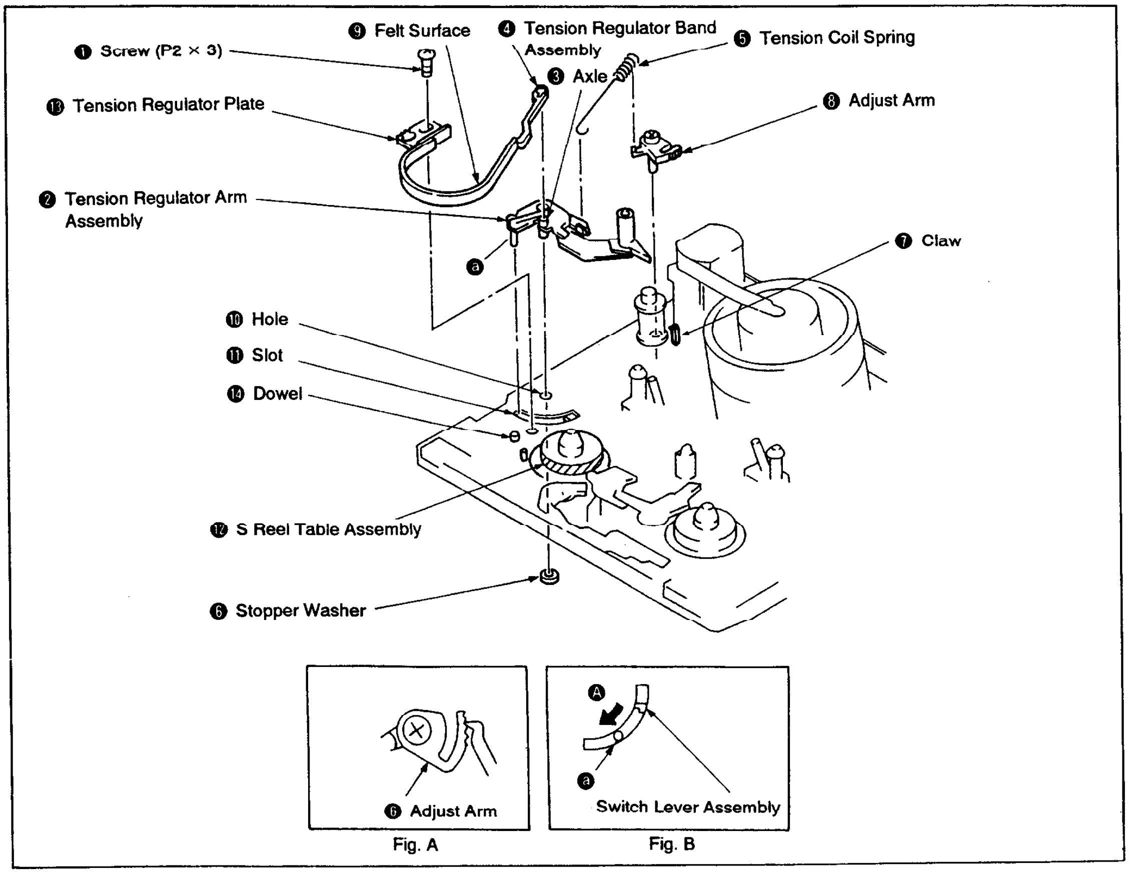

❶ Screw (P2 × 3)
❾ Felt Surface
❹ Tension Regulator Band Assembly
❺ Tension Coil Spring
❸ Axle
⓭ Tension Regulator Plate
❽ Adjust Arm
❷ Tension Regulator Arm Assembly
❼ Claw
ⓐ
❿ Hole
⓫ Slot
⓮ Dowel
⓬ S Reel Table Assembly
❻ Stopper Washer
❻ Adjust Arm
Ⓐ
ⓐ
Switch Lever Assembly

Fig. A

Fig. B

Fig. 3-12.

## 3-12. TENSION REGULATOR FWD POSITION PRESET (See Fig. 3-13.)

1) Load a cassette tape and set the FWD mode.
2) Confirm whether the distance between ⓐ part of the tension regulator arm ❶ and the groove ❷ of the chassis is 1.1 ± 0.3 mm. If this distance is not within the specified range, remove the cassette tape and perform the following adjustment.
3) Loosen the fixing screw ❹ of the tension regulator band assembly ❸.
4) Slide the tension regulator plate ❺ in the direction of the arrow Ⓐ if the measured distance is over the specified range, and in the direction of the arrow Ⓑ if it is under that range. Then, fix it with the screw ❹.
5) Repeat steps 1) and 2) and confirm that the distance is within the specified range.

**Note:** Use a cassette with the tape advanced halfway.

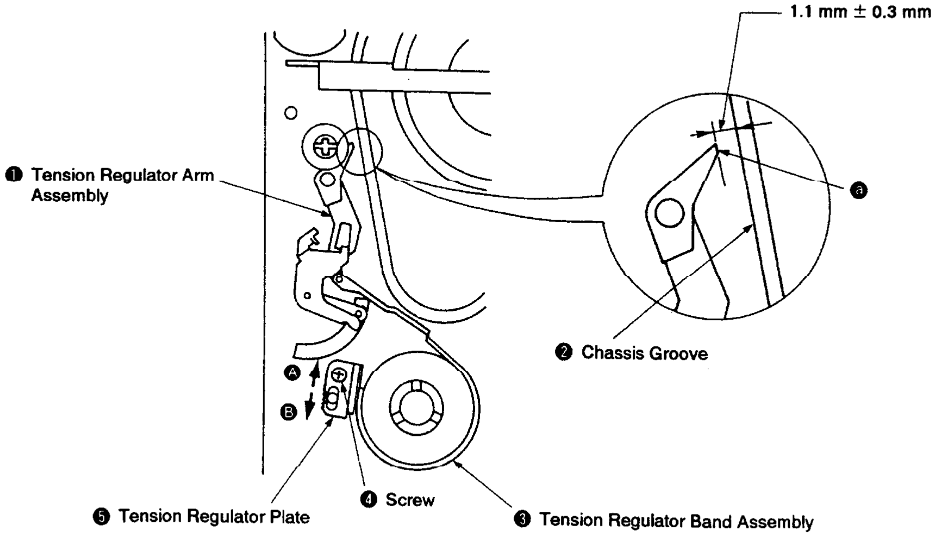

1.1 mm ± 0.3 mm
❶ Tension Regulator Arm Assembly
ⓐ
❷ Chassis Groove
Ⓐ
Ⓑ
❹ Screw
❺ Tension Regulator Plate
❸ Tension Regulator Band Assembly

Fig. 3-13.

## 3-13. DRUM ASSEMBLY, DEW SENSOR

### 1. Removal (See Fig. 3-14.)

1) Set the [EJECT] mode.
2) Remove the flexible board ❶ and the two connectors ❷.
3) Remove the guide guard assembly as described in section 3-2.
4) Remove the screw ❸, then remove the axle ground terminal ❹.
5) Remove the three screws ❺, then remove the drum assembly ❻ from the mechanism chassis.
6) Remove the connector ❿
7) Remove the screw ❼, then remove the dew sensor ❽.

**Note:**
- When removing the drum assembly ❻ from the mechanism chassis, take care not to cut the flexible board ❶ or the harness.
- Take care not to touch the head tip ❾.

### 2. Installation (See Fig. 3-14.)

1) Insert part 🅐 of the dew sensor ❽ into the notch ⓫ of the mechanism chassis, then secure it with the screw ❼.
2) Mount the connector ❿.
3) Clamp the harness ⓯ of the dew sensor ❽ with the reinforcing the claw ⓰ of the plate SS assembly (See Fig. A).
4) Insert the connector ❷ and the flexible board ❶ into the hole ⓬ of the mechanism chassis, align the drum assembly ❻ with the two dowels ⓭ and secure it with the three screws ❺.
5) Align the axle ground terminal ❷ with the two dowels ⓮ of the mechanism chassis and secure it with the screw ❸.
6) Mount the guide guard assembly as described in section 3-2.
7) Mount the two connectors ❷ and the flexible board ❶.

**Note:**
- Take care not to cut the flexible board ❶ or the harness ⓯.
- Take care not to touch the head tip ❾.
- After assembling, be sure to perform Tape Path Adjustment following instructions in section 4.

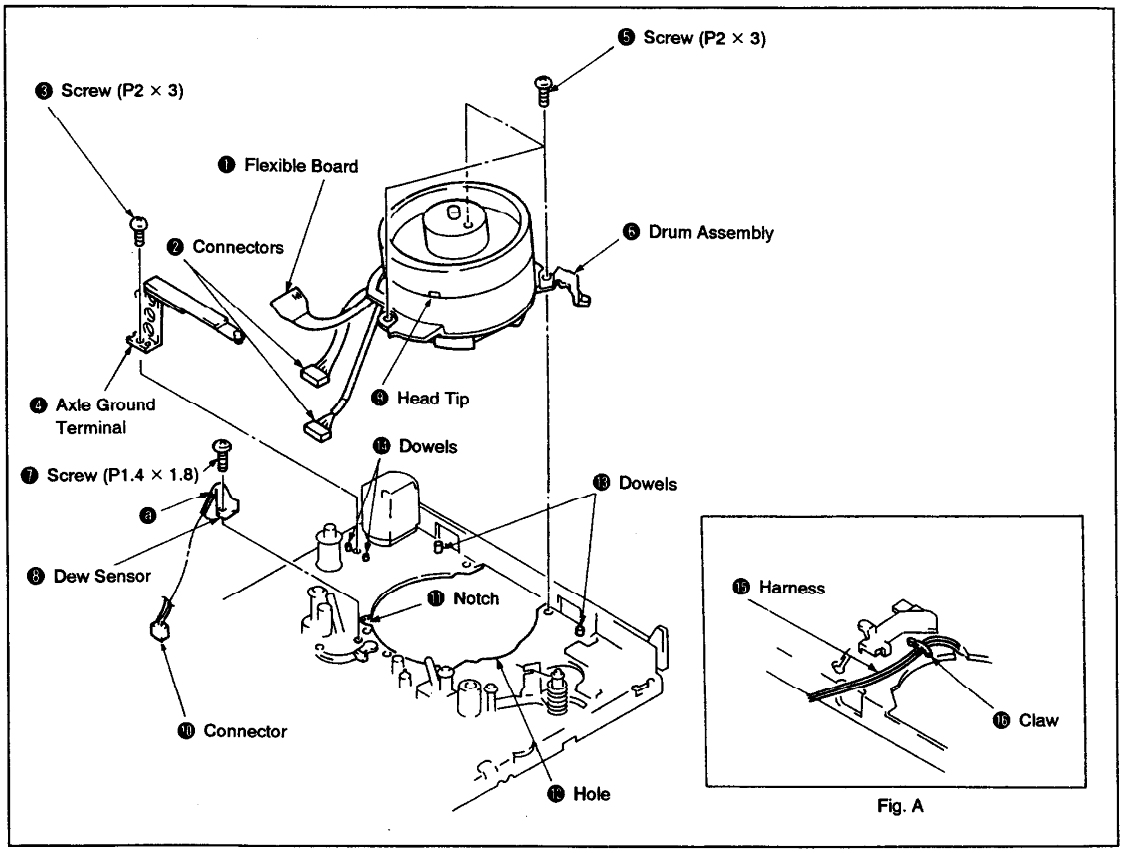

❺ Screw (P2 × 3)
❸ Screw (P2 × 3)
❶ Flexible Board
❷ Connectors
❻ Drum Assembly
❹ Axle Ground Terminal
❾ Head Tip
⓮ Dowels
❼ Screw (P1.4 × 1.8)
⓭ Dowels
ⓐ
❽ Dew Sensor
⓫ Notch
❿ Connector
⓬ Hole
⓯ Harness
⓰ Claw
Fig. A

Fig. 3-14.

## 3-14. EJECT LEVER, SWITCH LEVER ASSEMBLY, PINCH ROLLER SUB ARM ASSEMBLY

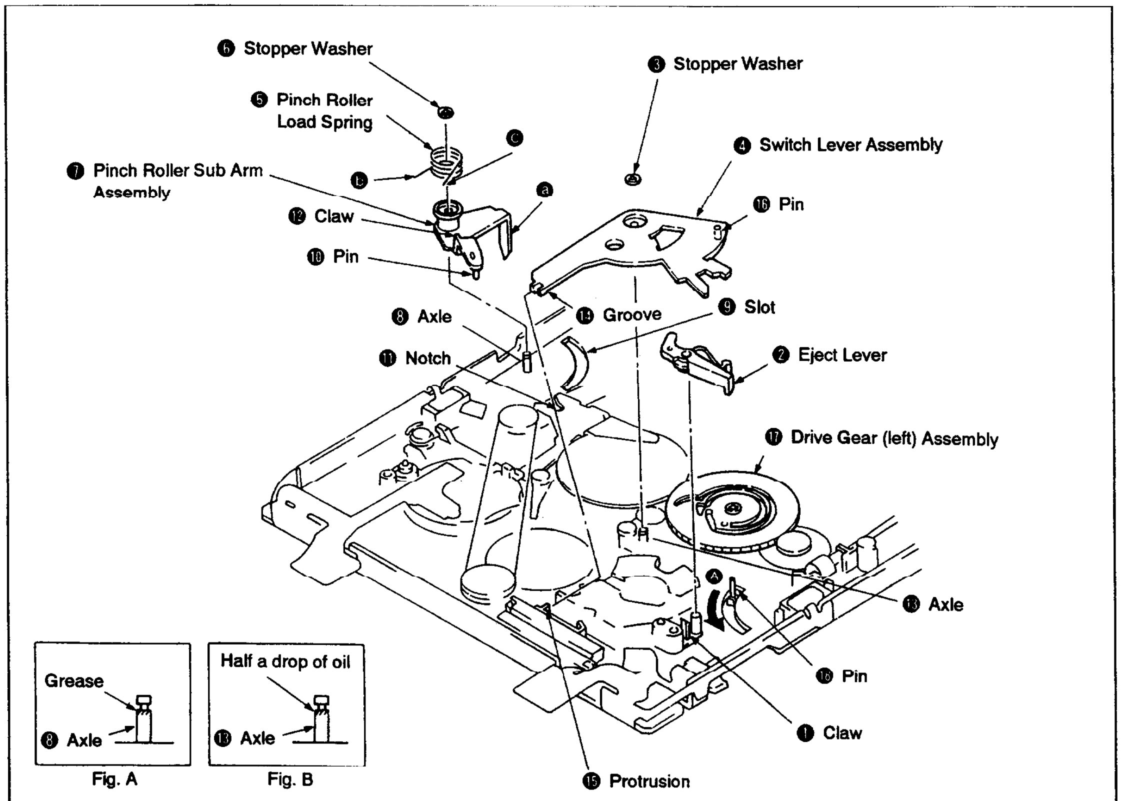
### 1. Removal (See Fig. 3-15.)

1) Remove the DC motor (capstan motor) as described in section 3-3.
2) Set the STOP mode.
3) Remove the claw ❶, then remove the eject lever ❷.
4) Remove the stopper washer ❸, then remove the switch lever assembly ❹.
5) Remove the pinch roller load spring ❺.
6) Remove the stopper washer ❻, then remove the pinch roller sub arm assembly ❼.

### 2. Installation (See Fig. 3-15.)

1) Grease the axle ❽ (See Fig. A).
2) Assemble by inserting ⓐ part of the pinch roller sub arm assembly ❼ into the slot ❾, then insert the pin ❿ into the loading lever assembly notch ⓫.
3) Secure with the stopper washer ❻.
4) Mount the pinch roller load spring ❺ by catching its ⓑ end between the claw ⓬ and the chassis side and its ⓒ end to the claw ⓬.
5) Apply half a drop of oil to the axle ⓭ (See Fig. B).
6) Align the groove ⓮ of the switch lever assembly ❹ with the mode detector switch protrusion ⓯, mount it on the axle ⓭, then insert the pin ⓰ into the drive gear (left) assembly ⓱ outer groove.
7) Secure with the stopper washer ❸.
8) Mount the eject lever ❷ and close the claw ❶.
9) Mount the DC motor (capstan motor) as described in section 3-3.

**Note:** When mounting the switch lever assembly ❹ onto the axle ⓭ with the tension regulator arm assembly installed, set the pin ⓲ to the arrow Ⓐ side of the switch lever assembly ❹.



❻ Stopper Washer
❺ Pinch Roller Load Spring
ⓒ
❼ Pinch Roller Sub Arm Assembly
ⓑ
ⓐ
⓬ Claw
❿ Pin
❸ Stopper Washer
❹ Switch Lever Assembly
⓰ Pin
❽ Axle
⓮ Groove
❾ Slot
⓫ Notch
❷ Eject Lever
⓱ Drive Gear (left) Assembly
Ⓐ
⓭ Axle
⓲ Pin
❶ Claw
⓯ Protrusion
Grease
❽ Axle
Fig. A
Half a drop of oil
⓭ Axle
Fig. B

Fig. 3-15.

## 3-15. TIMING BELT (L) , RC GEAR ASSEMBLY, LOADING LEVER ASSEMBLY, TIMING BELT (S), CONNECTING GEAR ASSEMBLY

### 1. Removal (See Fig. 3-16.)

1) Remove the DC motor (capstan motor) as described in section 3-3.
2) Remove the pinch roller sub arm assembly as described in section 3-14.
3) Set the STOP mode.
4) Remove the stopper washer ❶ , then remove the RC gear assembly ❷ from the axle ❹ with the timing belt (L) ❸ attached.
5) Remove the timing belt (L) ❸ from the idler pulley assembly ❺ .
6) Remove the stopper washer ❻ and remove the loading lever assembly ❽ while pushing the claw ❼ in the direction of the arrow 🅐 .
7) Turn the stopper ❾ approx. 90 ° in the direction of the arrow 🅑 .
8) Remove the connecting gear assembly ⓫ from the axle ⓰ with the timing belt (S) ❿ attached.
9) Remove the timing belt (S) ❿ from the idler pulley assembly ❺ .

**Note:** When removing the connecting gear ⓫ , take care not touch the flange section ⓑ .

### 2. Installation (See Fig. 3-16.)

1) Apply half a drop of oil to the axle ⓰ (See Fig. F).
2) Hook one end of the timing belt (S) ❿ onto the connecting gear assembly ⓫ and the other end onto gear ⓓ of the idler pulley assembly ❺ . (Refer to the figure.)
3) Mount the connecting gear assembly ⓫ with the timing belt (S) ❿ attached to the axle ⓰ .
4) Turn the stopper ❾ in the direction of the arrow 🅒 as far as it will go.
5) Apply half a drop of oil to the axle ⓬ (See Fig. A).
6) Fit the loading lever assembly ❽ to the axle ⓬ , secure the ⓐ part with the claw ❼ and place the pin ⓭ into the groove of the drive gear (right) assembly ⓮ .
7) Install the stopper washer ❻ .
8) Place the timing belt (L) ❸ around the gears of the RC gear assembly ❷ indicated in Fig. B, and its opposite side around the gear ⓒ of the idler pulley assembly ❺ . (See Fig. E.)
9) Mount the RC gear assembly ❷ onto the axle ❹ with the timing belt (L) ❸ attached, and engage it with the gear of the RK gear assembly ⓯ .
10) Install the stopper washer ❶ .
11) Grease parts of the loading lever assembly ❽ indicated in Fig. C.
12) Mount the pinch roller sub arm assembly as described in section 3-14.
13) Mount the DC motor (capstan motor) as described in section 3-3.

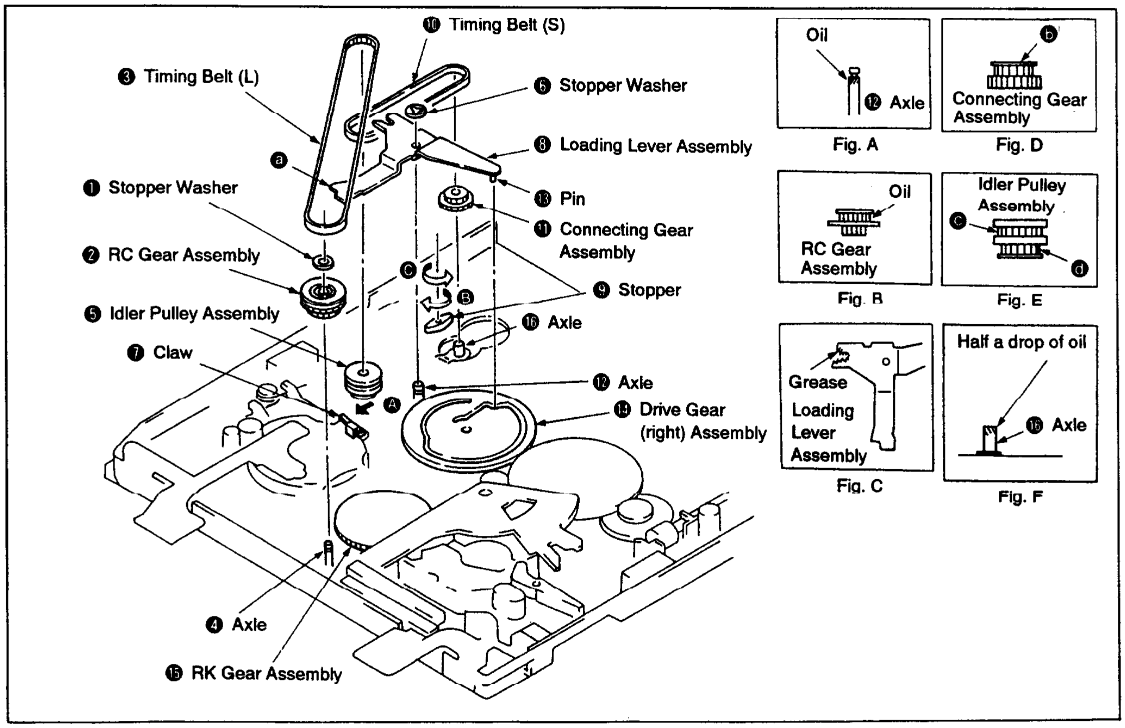

❿ Timing Belt (S)
❸ Timing Belt (L)
❻ Stopper Washer
❽ Loading Lever Assembly
ⓐ
❶ Stopper Washer
⓭ Pin
⓫ Connecting Gear Assembly
❷ RC Gear Assembly
ⓒ
🅑
❾ Stopper
❺ Idler Pulley Assembly
⓰ Axle
❼ Claw
⓬ Axle
🅐
⓮ Drive Gear (right) Assembly
❹ Axle
⓯ RK Gear Assembly
Oil
⓬ Axle
ⓑ
Connecting Gear Assembly
Oil
RC Gear Assembly
Idler Pulley Assembly
ⓒ
ⓓ
Grease
Loading Lever Assembly
Half a drop of oil
⓰ Axle

Fig. A

Fig. D

Fig. B

Fig. E

Fig. C

Fig. F

Fig. 3-16.

## 3-16. IDLER PULLEY, TS BRAKE ASSEMBLY, LB GEAR ASSEMBLY, RK GEAR ASSEMBLY

### 1. Removal (See Fig. 3-17.)

1) Remove the DC motor (capstan motor) as described in section 3-3.
2) Remove the switch lever assembly as described in section 3-14.
3) Remove the timing belt (L), the RC gear assembly, the loading lever assembly, the timing belt (S) and the connecting gear assembly described in section 3-15.
4) Set the STOP mode.
5) Remove the stopper washer ❶, then remove the idler pulley ❷.
6) Open the claw ❸, then remove the TS brake assembly ❹.
7) Remove the torsion coil spring (LB) ❺.
8) Remove the stopper washer ❻, then remove the LB gear assembly ❼.
9) Remove the RK gear assembly ❽.

**Note:** When removing the idler pulley ❷, take care not to touch the flange section ⓐ. (See Fig. C.)

### 2. Installation (See Fig. 3-17.)

1) Apply half a drop of oil to the axle ❾ (See Fig. A).
2) Mount the RK gear assembly ❽ onto the axle ❾, keeping it in horizontal position.
3) Apply half a drop of oil to the axle ❿ (See Fig. B).
4) Mount the LB gear assembly ❼ onto the axle ❿ and secure it with the stopper washer ❻.
5) Insert the torsion coil spring (LB) ❺ into the axle ⓫, then hook it to the mechanism chassis notch ⓬ and to the tab ⓭.
6) Mount the TS brake assembly ❹ and close the claw ❸.
7) Apply half a drop of oil to the axle ⓮ (See Fig. D).
8) Mount the idler pulley ❷ onto the axle ⓮, then secure it with the stopper washer ❶.
9) Mount the timing belt (L), the RC gear assembly, the loading lever assembly, the timing belt (S) and the connecting gear assembly as described in section 3-15.
10) Mount the switch lever assembly as described in section 3-14.
11) Mount the DC motor (capstan motor) as described in section 3-3.

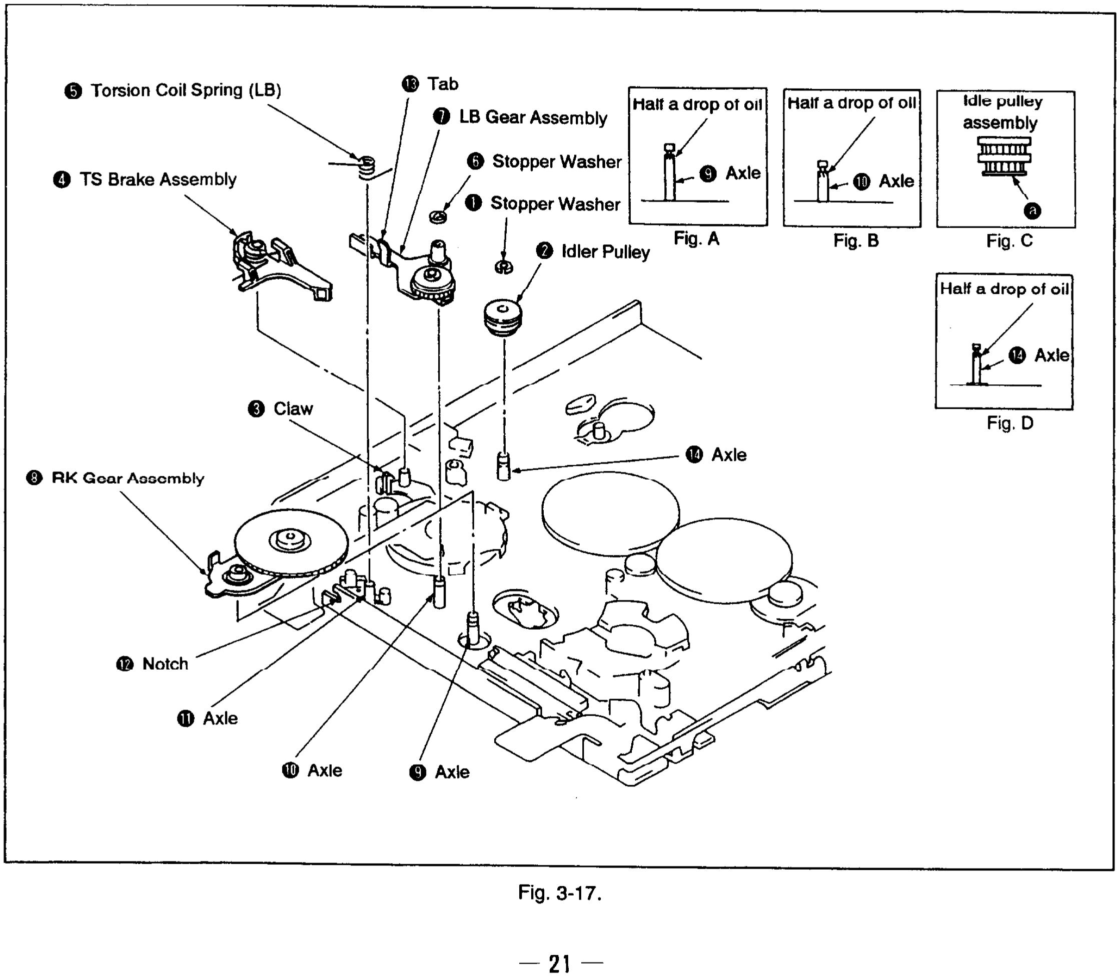

❺ Torsion Coil Spring (LB)
⓭ Tab
❼ LB Gear Assembly
❻ Stopper Washer
❹ TS Brake Assembly
❶ Stopper Washer
❷ Idler Pulley
Half a drop of oil
❾ Axle
Fig. A
Half a drop of oil
❿ Axle
Fig. B
Idle pulley assembly
ⓐ
Fig. C
Half a drop of oil
⓮ Axle
Fig. D
❸ Claw
⓮ Axle
❽ RK Gear Assembly
⓬ Notch
⓫ Axle
❿ Axle
❾ Axle

Fig. 3-17.

## 3-17. UL GEAR, UL BRAKE, UL ARM, LB PLATE SPRING

**1. Removal (See Fig. 3-18.)**

1) Remove the switch lever assembly as described in section 3-14.
2) Remove the stopper washer ❶, then remove the UL gear ❷.
3) Remove the UL arm ❸, the 1.6 mm-diameter poly washer ❹ and the LB plate spring ❺.
4) Remove the UL brake ❻.

**2. Installation (See Fig. 3-18.)**

1) Mount the UL brake ❻.
2) Apply half a drop of oil to the axle ❼ (See Fig. A).
3) Mount the LB plate spring ❺ to the axle ❼ as shown in Fig. B, then install the 1.6mm-diameter poly washer ❹.
4) Mount the UL arm ❸ to the axle ❼ so that the protrusion ❽ comes into the groove ❾ of the UL brake ❻.
5) Mount the UL gear ❷ to the axle ❼ and engage it with the gear of the drive gear (left) assembly ❿.
6) Install the stopper washer ❶.
7) Mount the switch lever assembly as described in section 3-14.

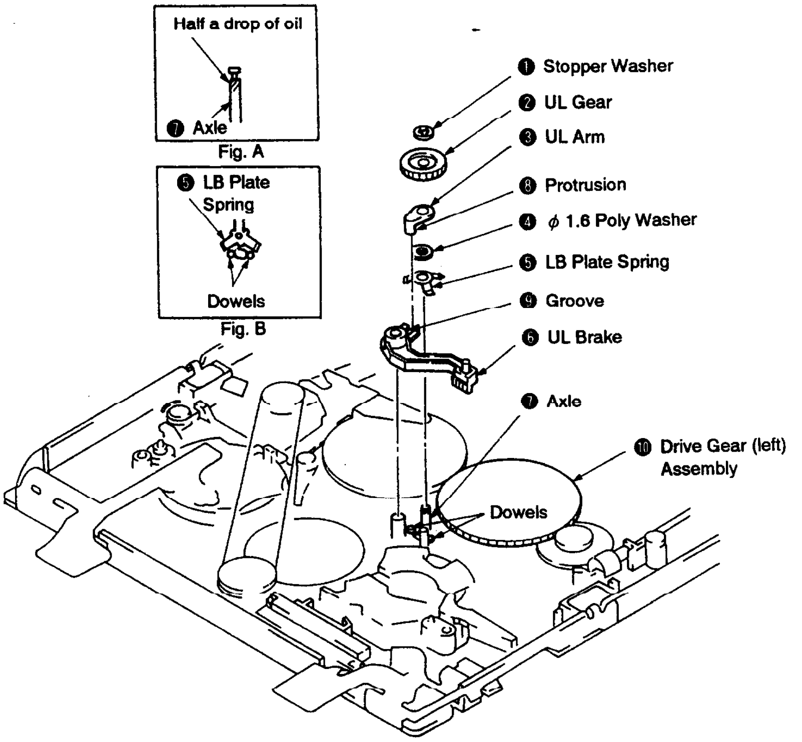

Half a drop of oil
❼ Axle
❺ LB Plate Spring
Dowels
❶ Stopper Washer
❷ UL Gear
❸ UL Arm
❽ Protrusion
❹ ϕ 1.6 Poly Washer
❺ LB Plate Spring
❾ Groove
❻ UL Brake
❼ Axle
❿ Drive Gear (left) Assembly
Dowels

Fig. A

Fig. B

Fig. 3-18.

## 3-18. COASTER (RIGHT) ASSEMBLY, DRIVE GEAR (RIGHT) ASSEMBLY

### 1. Removal (See Fig. 3-19.)

1) Remove the DC motor (capstan motor) as described in section 3-3.
2) Remove the drum unit as described in section 3-13.
3) Remove the switch lever assembly as described in section 3-14.
4) Remove the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
5) Set the STOP mode.
6) Remove the screw ❶, then remove the coaster plate spring ❷ and the coaster (right) assembly ❸.
7) Remove the two screws ❹, then remove the reinforcing plate TT ❺.
8) Remove the stopper washer 1.5 ❻, then remove the drive gear (right) assembly ❼.

### 2. Installation (See Fig. 3-19.)

1) Grease the points of the mechanism chassis shown in Fig A.
2) Apply half a drop of oil to the axle ❽ (See Fig. F).
3) Grease pin ❾, axle ❿ and dowel ⓮ of the coaster (right) assembly ❸ (See Fig. D).
4) Mount by aligning the pin ❾ and the axle ❿ with the slot ⓫ of the mechanism chassis.
5) Move the brake release arm ⓬ in the direction of the arrow Ⓐ to put it out of the way.
6) Mount the drive gear (right) assembly ❼ to the axle ❽, and engage it with the drive gear (left) assembly ⓭ as shown in Fig. B.
7) Align the ⓐ part with the ⓑ part, and the hole ⓮ with the pin ❾ of the coaster (right) assembly ❸.
8) Install the stopper washer 1.5 ❻.
9) Mount by aligning the coaster plate spring ❷ with the axle ❿ of the coaster (right) assembly ❸ and pin ❾, then secure with the screw ❶.
10) Mount the reinforcing plate TT ❺ aligning it with the dowel ⓯, then tighten the two screws ❹ in the indicated order.
11) Grease the points indicated in Figs. C and E.
12) Mount the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
13) Mount the switch lever assembly as described in section 3-14.
14) Mount the drum unit as described in section 3-13.
15) Mount the DC motor (capstan motor) as described in section 3-3.

**Note:**
- Screw ❶ should be tightened with a tightening torque of approx. 500g•cm. If tightened too much, the coaster (right) assembly ❸ and the coaster plate spring ❷ will be deformed.
- After installing, be sure to perform tape path adjustment as described in section 4.

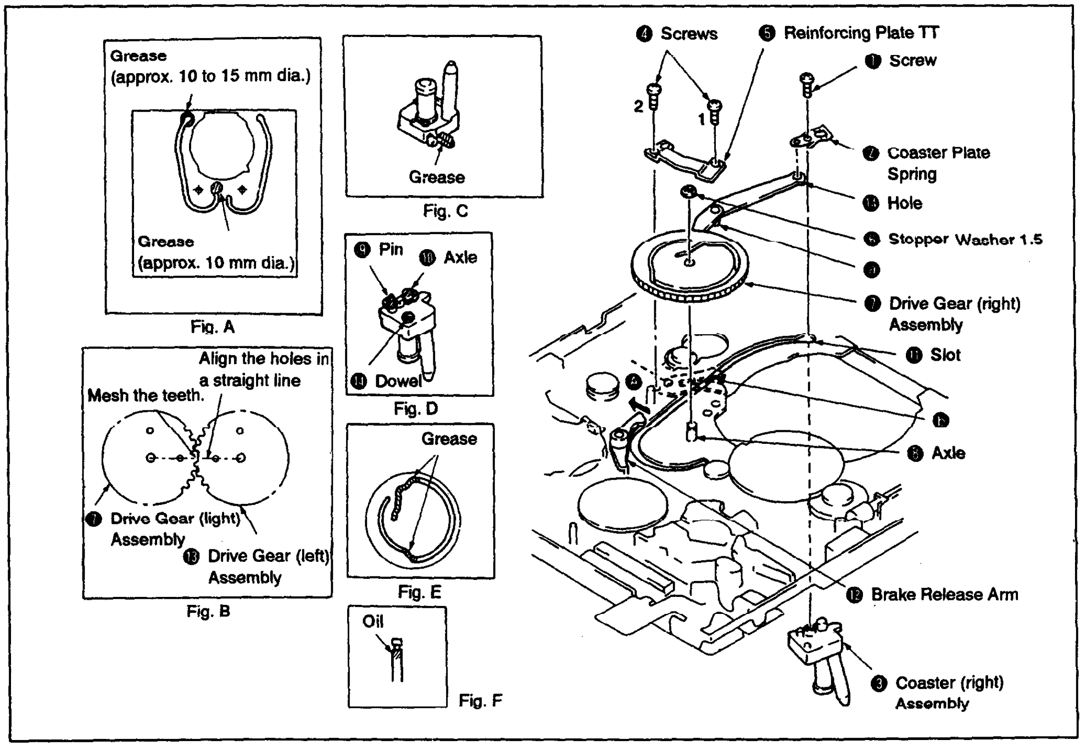

Grease
(approx. 10 to 15 mm dia.)
Grease
(approx. 10 mm dia.)
Fig. A
Align the holes in a straight line
Mesh the teeth.
❼ Drive Gear (right) Assembly
⓭ Drive Gear (left) Assembly
Fig. B
Grease
Fig. C
❾ Pin
❿ Axle
⓮ Dowel
Fig. D
Grease
Fig. E
Oil
Fig. F
❹ Screws
❺ Reinforcing Plate TT
❶ Screw
2
1
❷ Coaster Plate Spring
⓯ Hole
❻ Stopper Washer 1.5
ⓐ
❼ Drive Gear (right) Assembly
⓫ Slot
Ⓐ
ⓑ
❽ Axle
⓬ Brake Release Arm
❸ Coaster (right) Assembly

Fig. 3-19.

## 3-19. COASTER (LEFT) ASSEMBLY, DRIVE GEAR (LEFT) ASSEMBLY

### 1. Removal (See Fig. 3-20.)

1) Remove the DC motor (capstan motor) as described in section 3-3.
2) Remove the drum assembly as described in section 3-13.
3) Remove the switch lever assembly and the pinch roller sub-arm assembly as described in section 3-14.
4) Remove the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
5) Remove the coaster (right) assembly and the drive gear (right)assembly as described in section 3-18.
6) Remove the screw ❶ , then remove the coaster plate spring ❷ and the coaster (left) assembly ❸ .
7) Remove the two screws ❹ , then remove the reinforcing plate SS assembly ❺ .
8) Remove the stopper washer 1.5 ❻ , then remove the drive gear (left) assembly ❼ .

### 2. Installation (See Fig. 3-20.)

1) Grease the points of the mechanism chassis shown in Fig A.
2) Apply half a drop of oil to the axle ❽ (See Fig. E).
3) Grease pin ❾ , axle ❿ and dowel ⓰ of the coaster (left) assembly ❸ (See Fig. B).
4) Mount by aligning the pin ❾ and the axle ❿ with the slot ⓫ of the mechanism chassis.
5) Fit the drive gear (left) assembly ❼ to the axle ❽ , and mount so that the gear engages with the wheel gear ⓭ and the UL gear ⓮ .
6) Align the ⓐ part with the slot ⓫ , and the hole ⓮ with the pin ❾ of the coaster (left) assembly ❸ .
7) Install the stopper washer 1.5 ❻ .
8) Mount by aligning the coaster plate spring ❷ with the axle ❿ and pin ❾ of the coaster (left) assembly ❸ , then secure with the screw ❶ .
9) Mount the reinforcing plate SS assembly ❺ aligning it with the dowel ⓯ , then tighten the two screws ❹ in the indicated order.
10) Grease points indicated in Figs. C and D.
11) Mount the coaster (right) assembly and the drive gear (right)assembly as described in section 3-18.
12) Mount the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
13) Mount the switch lever assembly and the pinch roller sub arm assembly as described in section 3-14.
14) Mount the drum assembly as described in section 3-13.
15) Mount the DC motor (capstan motor) as described in section 3-3.

**Note:**
- Screw ❶ should be tightened with a tightening torque of approx. 500g•cm. If tightened too much, the coaster (right) assembly ❸ and the coaster plate spring ❷ will be deformed.
- After installing, be sure to perform tape path adjustment as described in section 4.

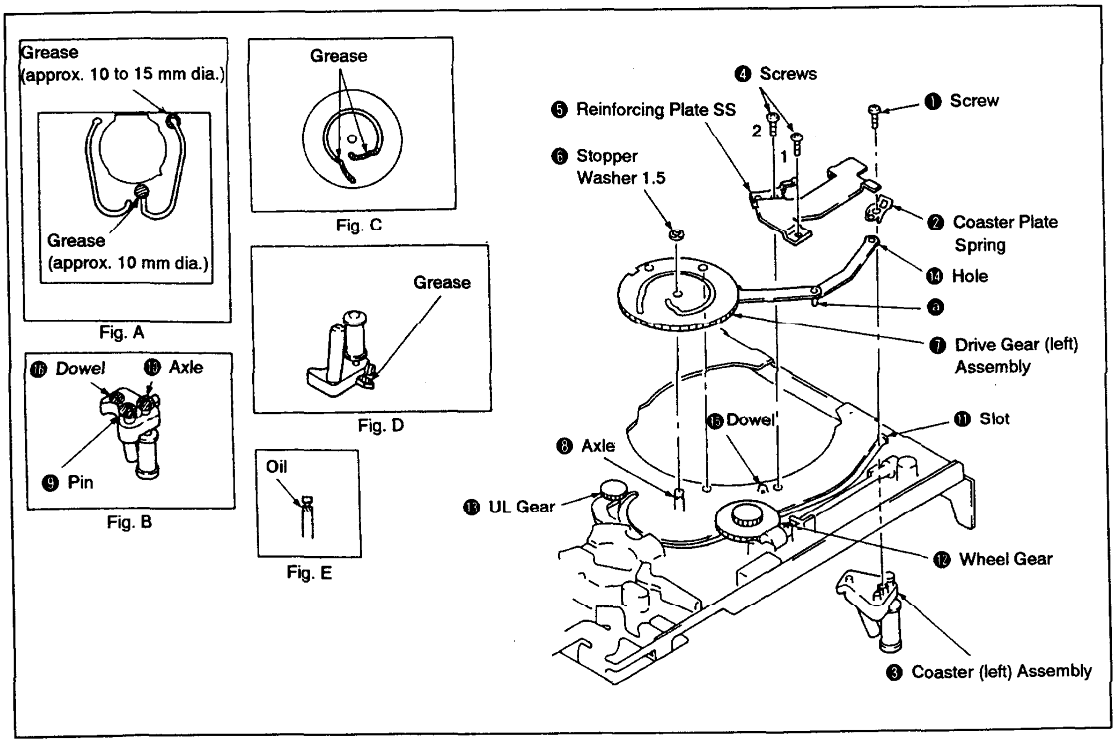

Grease
(approx. 10 to 15 mm dia.)
Grease
(approx. 10 mm dia.)
⓰ Dowel
❿ Axle
❾ Pin
Grease
Grease
Oil
❹ Screws
❺ Reinforcing Plate SS
2
1
❶ Screw
❻ Stopper
Washer 1.5
❷ Coaster Plate
Spring
⓮ Hole
ⓐ
❼ Drive Gear (left)
Assembly
⓯ Dowel
⓫ Slot
❽ Axle
⓭ UL Gear
⓬ Wheel Gear
❸ Coaster (left) Assembly

Fig. A

Fig. B

Fig. C

Fig. D

Fig. E

Fig. 3-20.

## 3-20. LOADING MOTOR, BRAKE RELEASE ARM, WHEEL GEAR, WORM ASSEMBLY

### 1. Removal (See Fig. 3-21.)

1) Remove the DC motor (capstan motor) as described in section 3-3.
2) Remove the switch lever assembly and the pinch roller sub arm assembly as described in section 3-14.
3) Remove the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
4) Remove the drive gear (right) assembly as described in section 3-18.
5) Remove the drive gear (left) assembly as described in section 3-19.
6) Remove the two screws ❶, then remove the loading motor assembly ❷.
7) Remove the brake release arm ❸.
8) Remove the stopper washer ❹, then remove the wheel gear ❺.
9) Remove the worm assembly ❻ from the six claws ❼.

### 2. Installation (See Fig. 3-21.)

1) Mount the worm assembly ❻, matching it to the six claws ❼.
2) Grease the shaded parts of the worm assembly ❻ (five places) (see Fig A).
3) Apply half a drop of oil to the axle ❽ (See Fig. B).
4) Fit the wheel gear ❺ to the axle ❽ and engage it with the gear of the worm assembly ❻.
5) Mount the brake release arm ❸.
6) Grease the whole perimeter of the gear of the loading motor assembly ❷.
7) Align the loading motor assembly ❷ with the mechanism chassis and secure it with the two screws ❶.
8) Mount the drive gear (left) assembly as described in section 3-19.
9) Mount the drive gear (right) assembly as described in section 3-18.
10) Mount the timing belt (L), the RC gear assembly and the loading lever assembly as described in section 3-15.
11) Mount the switch lever assembly and the pinch roller sub arm assembly as described in section 3-14.
12) Mount the DC motor (capstan motor) as described in section 3-3.

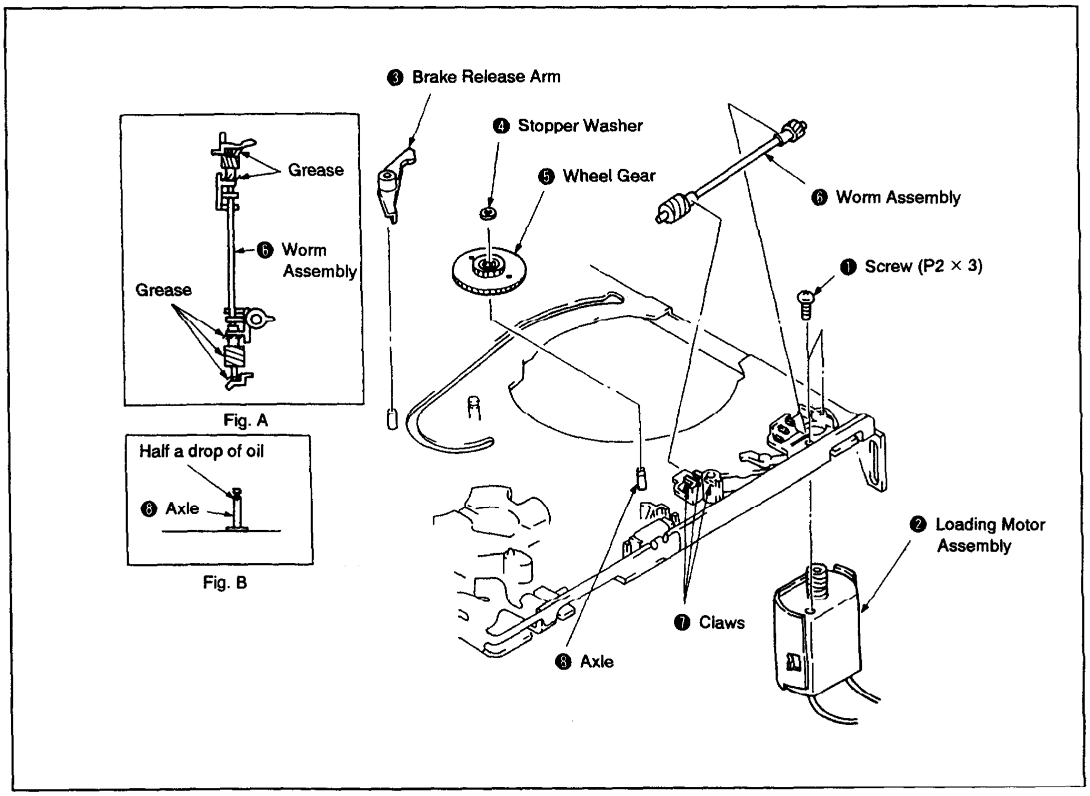

❸ Brake Release Arm
❹ Stopper Washer
❺ Wheel Gear
❻ Worm Assembly
❶ Screw (P2 × 3)
❷ Loading Motor Assembly
❼ Claws
❽ Axle
Grease
❻ Worm Assembly
Grease
Fig. A
Half a drop of oil
❽ Axle
Fig. B

Fig. 3-21.

## 3-21. ROTARY UPPER DRUM REPLACEMENT

### 1. Removal

- If possible, make a recording before removal.

1) Detach the six solderings ⓐ, then use a pair of tweezers or the like to confirm that the terminals passing through the board holes from below can move freely.
2) Remove the two screws ❶ (See Fig. 3-22).
3) Mount the jig ❹ (Ref. No. J-7) with the two supplied screws ❷, then screw the attached hexagon socket screws ❸ to the jig ❹. The rotary upper drum ❺ will move upward and come off (See Fig. 3-23).

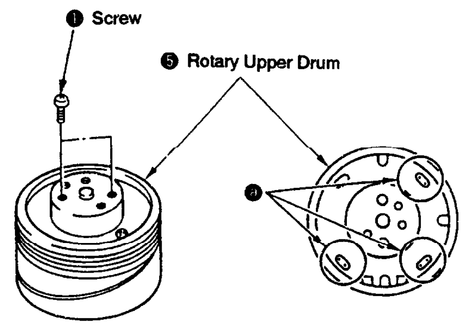


Fig. 3-22.

### 2. Installation

1) Wipe clean the flange surface and the rotary upper drum ❺ surface that makes contact with it, and confirm that they are free from dirt and scratches.
2) Insert the jig ❼ (Ref. No. J-7) into the drum positioning hole, then set the rotary upper drum ❺ by passing the jig through its positioning hole ❻.
   **Note:** Confirm that the terminals ❽ protrude slightly from the rotary upper drum board holes (See Fig. 3-24).
3) Remove the jig ❼ and push down the rotary upper drum ❺ gently by hand. If it does not go all the way down, secure it temporarily by tightening the two hexagon socket screws ❶ alternately.
4) Insert the jig ❼ into the positioning hole ❻ again and confirm that it goes in smoothly. If it does not, loosen the two screws ❶, repeat step 3 of the Removal paragraph and restart the setting procedure.
5) Tighten the screws ❶.
6) Solder the terminals ❽ (ⓐ in Fig. 3-22).
   **Note:** Take care that no solder flows below the board.

**Note:** After installing, be sure to perform tape path adjustment as described in section 4.

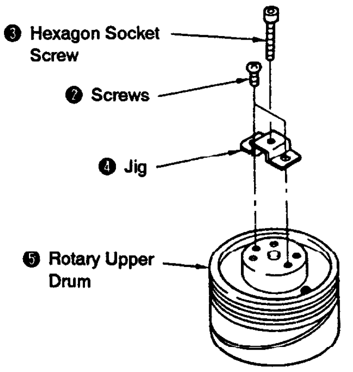


Fig. 3-23.

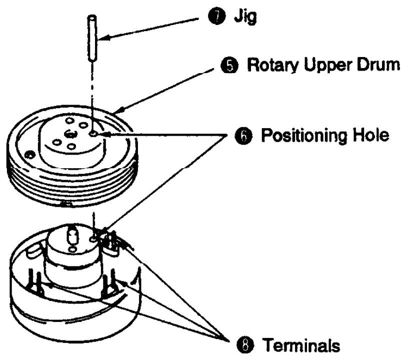


Fig. 3-24.

## 3-22. FWD BACK TENSION (See Fig. 3-25.)

1) Set the torque cassette (Ref. No. J-6).
2) Set the FWD mode and confirm that S reel table torque value is within 9 to 13 g•cm.
3) If the torque value does not meet the specification, adjust the adjust arm ❶.

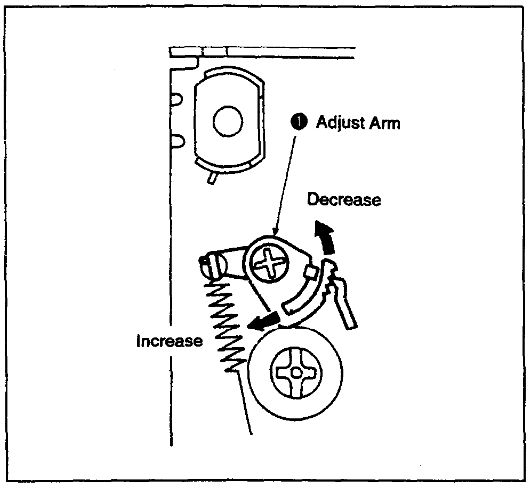


Fig. 3-25.

## 3-23. REEL TORQUE CHECK

1) Set the torque cassette.
2) Set the FWD mode and confirm that T reel table torque value is within 7 to 15 g•cm.
3) Set the REV mode and confirm that S reel table torque value is within 29 ± 6 g•cm.
4) Set the REV mode and confirm that T reel table torque value is within 13 to 25 g•cm.
5) If a torque value does not meet the specifications above, replace the corresponding reel table.

# 4. TAPE PATH ADJUSTMENT

**[The Track Shift Mode]**

In the 8 mm video system, instantaneous tape speed control is performed using four kinds of pilot signals, and high-precision tracking is achieved through the ATF (Automatic Track Finding) system. This makes a tracking control knob unnecessary and allows for precise tracing.

On the other hand, however, tape path adjustment presents some difficulties when the ATF system is used. Namely, since the ATF system will automatically compensate to some degree for head tracing errors, thorough adjustment is not possible.

This can be solved by setting the track shift mode for tracking fine adjustment. ATF will be compulsorily activated, shifting the tracking amount by a fixed amount (approx. 1/4) and thus making tracking fine adjustment easy. Furthermore, no track shift jigs are required.

## 4-1. TRACK SHIFT MODE SETTING

**[Setting Procedure]**

- Connect the TEST A and TEST B terminals to the COM terminal.
  Example:
  NTSC ········ GV-8
  PAL ·········· GV-8E
  Connect Pins ① and pin ③ of CN017 on the
  { SV-34 board (GV-8) / SV-35 board (GV-8E) } to pin ② of it. (See Fig. 4-1)

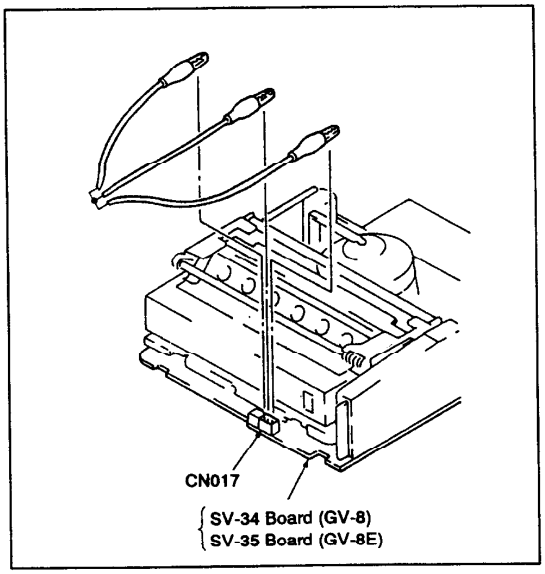
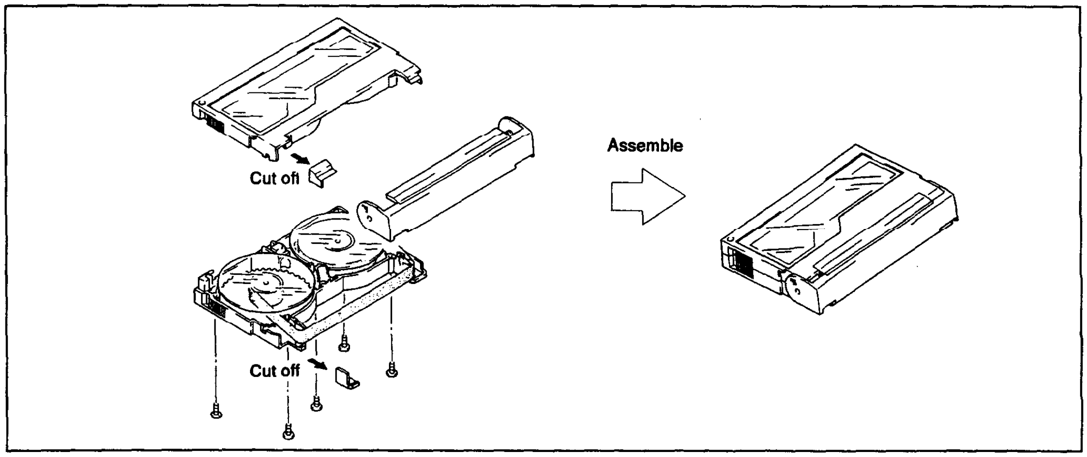


Fig. 4-1.

### [Note on Adjustment of No.7 Guide (TG-7)]

The height adjustment screw for No.7 guide (TG-7) is located at some distance from the guide (refer to Fig. 4-2).
Therefore, when performing section 4-6. No.7 Guide (TG-7) Adjustment it is convenient to use the alignment tape for tracking (Ref. No. J-5), modified as follows, and perform adjustment in playback mode.


Cut off
Cut off
Assemble

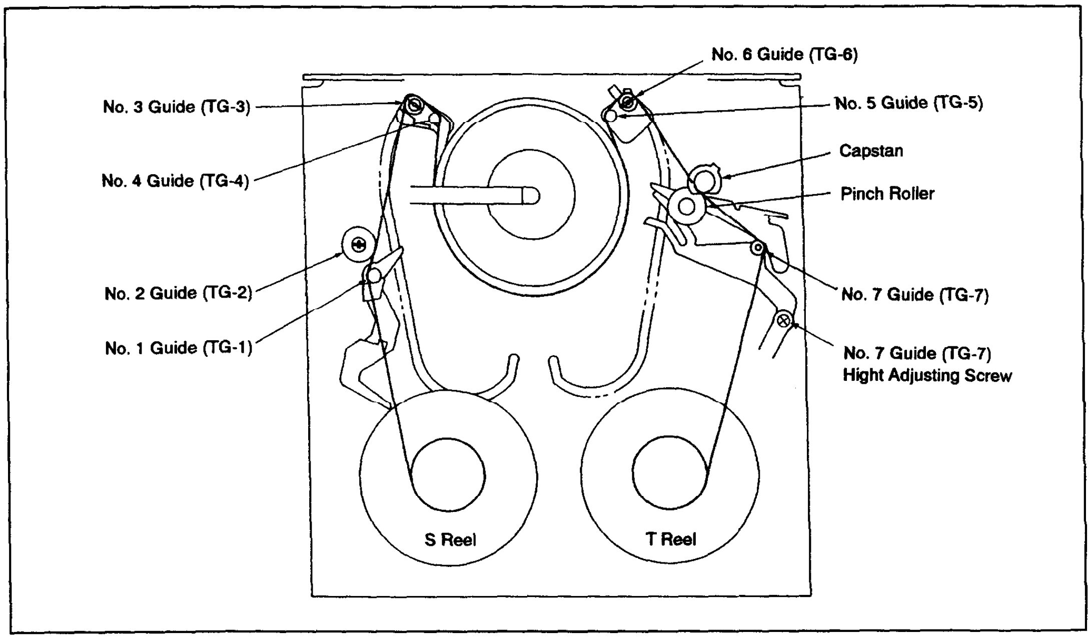

No. 6 Guide (TG-6)
No. 3 Guide (TG-3)
No. 5 Guide (TG-5)
Capstan
No. 4 Guide (TG-4)
Pinch Roller
No. 2 Guide (TG-2)
No. 7 Guide (TG-7)
No. 1 Guide (TG-1)
No. 7 Guide (TG-7) Hight Adjusting Screw
S Reel
T Reel

Fig. 4-2.

## 4-2. PREPARATIONS FOR ADJUSTMENT

1) Clean tape path surfaces (tape guides, drum, capstan shaft, pinch roller) (See Fig. 4-2).
2) Connection of oscilloscope and output method of waveform.
CH 1: RF signal output of the drum head (V RF OUT)
Method for signal output:
Short-circuit the external trigger output (RF SW. P) and GND.

Example:
NTSC ····· GV-8
PAL ······· GV-8E
CH 1: Pin ③ (V RF OUT) of CN018 on the
{ SV-34 board (GV-8)
SV-35 board (GV-8E)
Method for signal output:
Short-circuit pin ① (GND) and pin ② (RF SW.P) of CN018 on the
{ SV-34 board (GV-8)
SV-35 board (GV-8E)

3) Play back the alignment tape for tracking adjustment (Ref. No. J-5).
4) Confirm that both the entrance and exit side RF waveforms of the oscilloscope are flat (See Fig. 4-4). If they are not, adjust as follows.

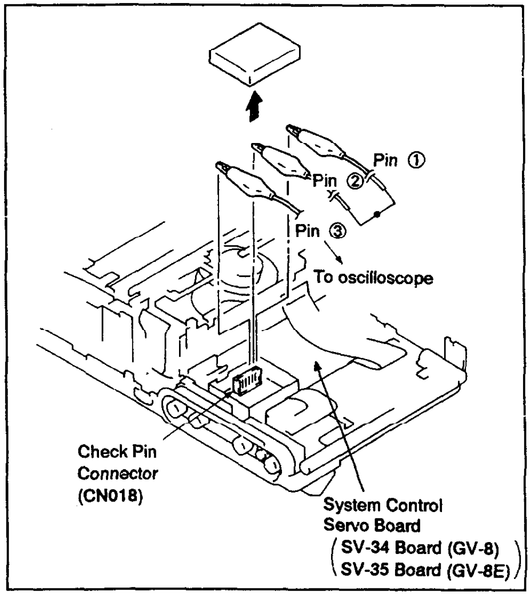

Pin ①
Pin ②
Pin ③
To oscilloscope
Check Pin Connector (CN018)
System Control Servo Board
(SV-34 Board (GV-8)
SV-35 Board (GV-8E))

Fig. 4-3.

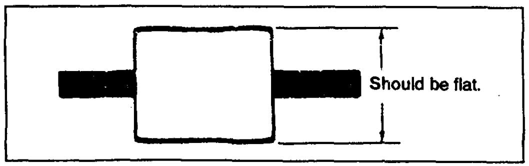

Should be flat.

Fig. 4-4.

## 4-3. TRACKING ADJUSTMENT (See Fig. 4-5.)

1) Play back the alignment tape for tracking adjustment.
2) Pass a hexagonal wrench, screwdriver (Ref. No. J-11) or the like through the hole ❶, loosen the lockscrew ❷ a little, then make the entrance side waveform flat by turning the No. 3 guide (TG-3) ❸.
3) Pass a hexagonal wrench, screwdriver or the like through the hole ❹, loosen the lockscrew ❺ a little, then make the exit side waveform flat by turning the No. 6 guide (TG-6) ❻.

**Note:** Take care not to loosen lockscrews too much, since guides come loose easily.

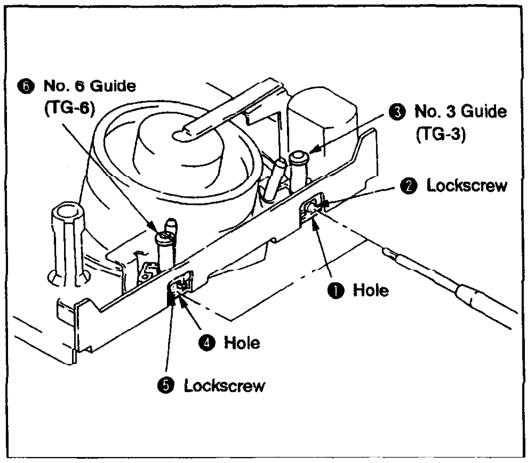

❻ No. 6 Guide (TG-6)
❸ No. 3 Guide (TG-3)
❷ Lockscrew
❶ Hole
❹ Hole
❺ Lockscrew

Fig. 4-5.

## 4-4. TRACKING FINE ADJUSTMENT (See Figs. 4-5. and 4-6.)

1) Play back the alignment tape for tracking adjustment and set the track shift mode.
2) Confirm whether the waveform is flat. If it is not, turn the No. 3 (TG-3) and No. 6 (TG-6) guides so that it becomes flat.
3) Fix the No. 3 guide ❸ by tightening its lockscrew ❷. Then confirm that the entrance side waveform has not changed.
4) Fix the No. 6 guide ❻ by tightening its lockscrew ❺. Then confirm that the exit side waveform has not changed.

**Note:** The set screws ❷ and ❺ should be tightened with a tightening torgue of approx. 200g•cm ± 10%.
If tightened too much, there is danger of damaging the thread.

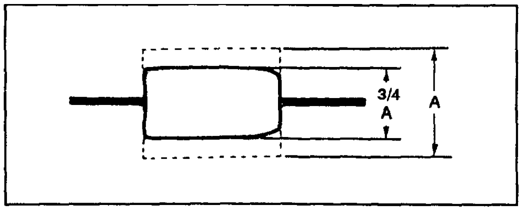


Fig. 4-6.

## 4-5. No. 2 GUIDE (TG-2) ADJUSTMENT

When the No. 2 guide has been turned or replaced, perform height presetting before this adjustment.

### 4-5-1. No. 2 Guide (TG-2) Height Presetting (See Fig. 4-7.)

1) Adjust the height from the mechanism chassis upper surface to the TG-2 upper flange ❶ upper surface to 18.6 mm by rotating the TG-2 upper flange ❶.

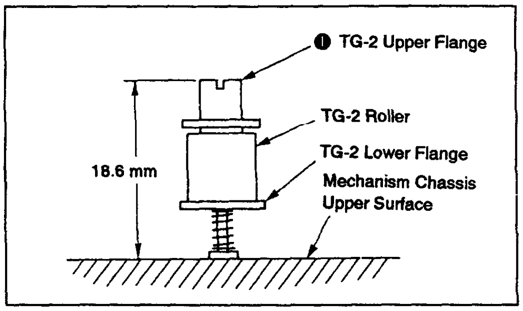


Fig. 4-7.

**[Reference]**
This U mechanism is equipped with four adjustable guides (TG-2, 3, 6 and 7) . To raise or lower the respective guide rotate the corresponding adjustment screw as shown below.

| Guide | Guide adjustment | Rotating direction of adjustment screw |
|---|---|---|
| TG-2, 3, 6 | Raise | Counterclockwise |
| | Lower | Clockwise |
| TG-7 | Raise | Counterclockwise |
| | Lower | Clockwise |

### 4-5-2. No. 2 Guide (TG-2) Adjustment (See Figs. 4-8. and 4-9.)

1) Play back a thin tape like the P6-120MP, etc. and set the REV mode.
2) Confirm that the tape is not bent at the lower flange ❷ of the No. 2 guide (TG-2) ❶ (See Fig. 4-8). If it is, turn the upper flange ❸ of the No. 2 guide (TG-2) ❶ clockwise with a screwdriver, lowering it until the tape is straightened.
3) Play back the alignment tape for tracking adjustment.
4) Perform tracking adjustment and tracking fine adjustment as described in sections 4-3. and 4-4.
5) In the track shift mode, CUE/REV the tape, then play it back and confirm that the RF waveform rises flat within 2 seconds.
6) If the waveform is not normal (See Fig. 4-9), turn the upper flange ❸ of the No. 2 guide (TG-2) ❶ 90° counter-clockwise and repeat step 5.
Repeat steps 5 and 6 until a normal waveform is obtained. Then, confirm that the tracking waveform has not changed. If it has, perform fine adjustment of entrance side tracking and repeat step 5.

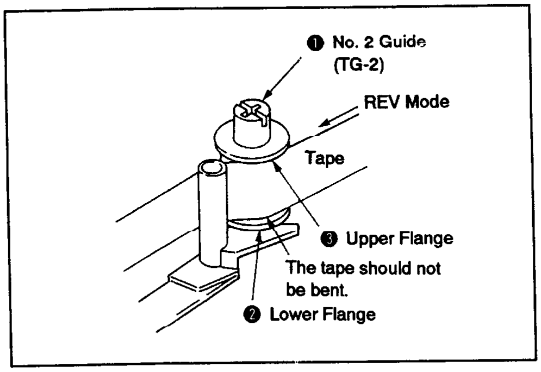

❶ No. 2 Guide (TG-2)
REV Mode
Tape
❸ Upper Flange
The tape should not be bent.
❷ Lower Flange

Fig. 4-8.

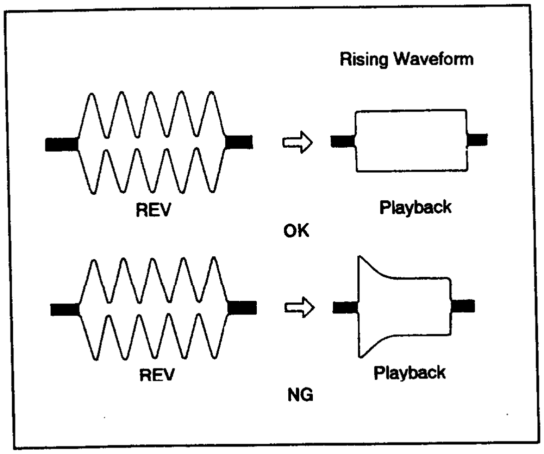

Rising Waveform
REV
Playback
OK
REV
Playback
NG

Fig. 4-9.

### 4-6. No. 7 GUIDE (TG-7) ADJUSTMENT (See Fig. 4-10.)

1) Play back the alignment tape for tracking adjustment and set the REV mode.
2) Confirm that the tape is not bent between the No. 6 guide (TG-6) ❶ and the capstan ❷. If it is, turn the hight adjusting screw ❹ of the No. 7 guide (TG-7) ❸ until the tape is straightened.
3) Set the playback mode again and confirm that the tape is not bent between the capstan ❷ and the hight adjusting screw ❹ of the No. 7 guide (specification:0.5 mm or less). If the tape is bent beyond the specification, turn the No. 7 guide (TG-7) ❸ until bending is within the specification (0.5 mm).
If in the REV mode tape bending between the No. 6 guide (TG-6) ❶ and the capstan ❷ is 0.3 mm or less, adjustment can be considered completed.

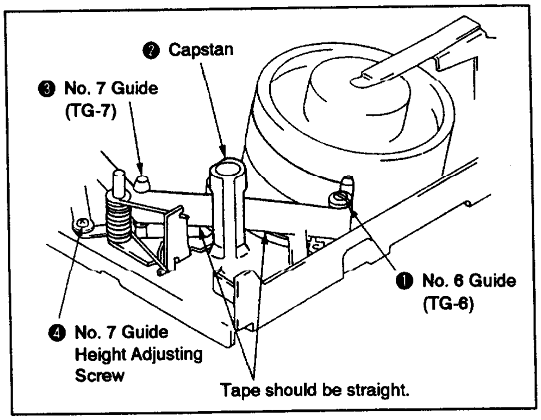

❷ Capstan
❸ No. 7 Guide (TG-7)
❶ No. 6 Guide (TG-6)
❹ No. 7 Guide Height Adjusting Screw
Tape should be straight.

Fig. 4-10.

## 4-7. CUE AND REV WAVEFORM CHECK (See Fig. 4-11.)

1) Play back the alignment tape for tracking adjustment and set the REV mode. Confirm that waveform peaks maintain a constant pitch of 5 seconds or more (See Fig. 4-11). In case pitch is not constant, perform section 4-4. Tracking Fine Adjustment and section 4-6. No. 7 Guide Adjustment.
2) Set the CUE mode. Confirm that waveform peaks still maintain a constant pitch of 5 seconds or more (See Fig. 4-11). Otherwise, perform section 4-4. Tracking Fine Adjustment.

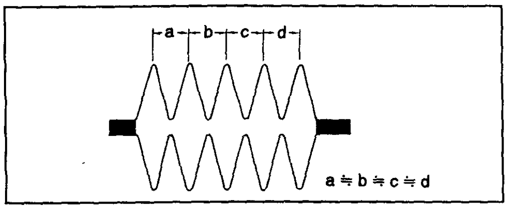


Fig. 4-11.

## 4-8. CHECK AFTER ADJUSTMENT

### 4-8-1. Tracking Check

1) Confirm that the amplitude of RF waveform is reduced to approx. 3/4 when the track shift mode is set (See Fig. 4-12).
2) Then, confirm that the minimum amplitude value (EMIN) is 65% of the maximum value (EMAX) or larger (See Fig. 4-13).
3) Confirm that no large fluctuations occur on the waveform (See Fig. 4-14).

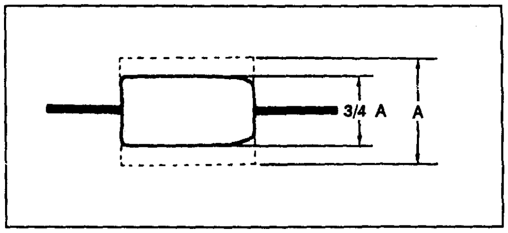
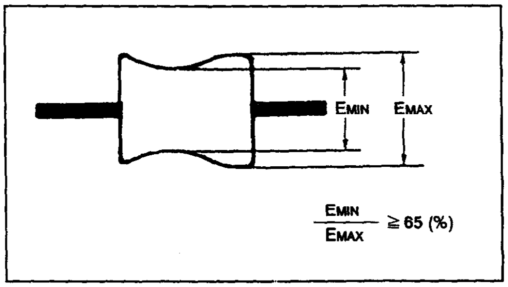
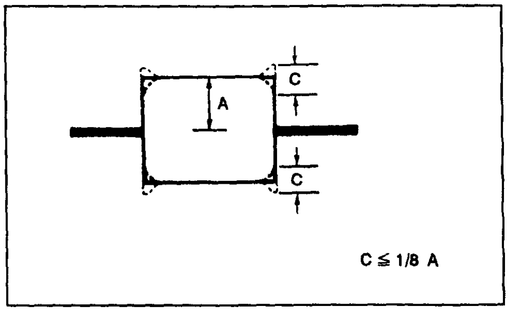


Fig. 4-12.



$\frac{E_{MIN}}{E_{MAX}} \geqq 65\ (\%)$

Fig. 4-13.



$C \leqq 1/8\ A$

Fig. 4-14.

### 4-8-2. Rising Check (See Fig. 4-15.)

1) Play back the alignment tape for tracking adjustment.
2) Cancel the track shift mode.
3) Eject the tape, then load it again.
4) Set the playback mode and confirm that the RF waveform rises flat within 2 seconds. Also confirm that the tape is not bent around the pinch roller (See Fig. 4-15).
5) CUE/REV and FF/REW the tape, then play it back and confirm that the RF waveform rises flat within 2 seconds. Also confirm that the tape is not bent around the pinch roller.
6) Repeat steps 3) to 5) once more.

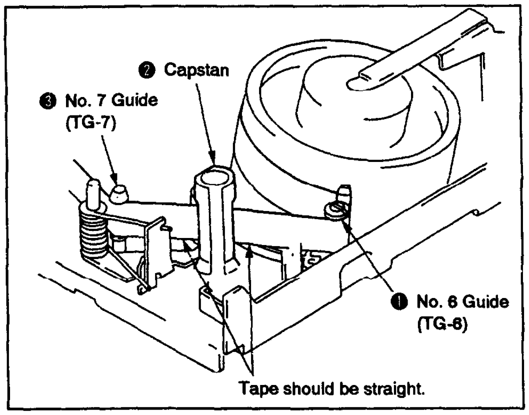

❷ Capstan
❸ No. 7 Guide (TG-7)
❶ No. 6 Guide (TG-6)
Tape should be straight.

Fig. 4-15.

### 4-8-3. Tape Path Check (See Fig. 4-16.)

1) Play back a thin tape like the P6-120MP (NTSC) or P5-90MP (PAL), etc. and confirm that no tape rising occurs, and that curling is less than 0.3 mm, at the lower flange of the No. 2 guide, the upper flange of the No. 3 guide, the upper flange of the No. 6 guide and the No. 7 guide upper and lower flanges.
2) Confirm that no tape rising occurs and that curling is less than 0.3 mm at the flanges of all guide when pressing the FF button in the playback mode to set the CUE mode, or the REW button to set the REV mode.

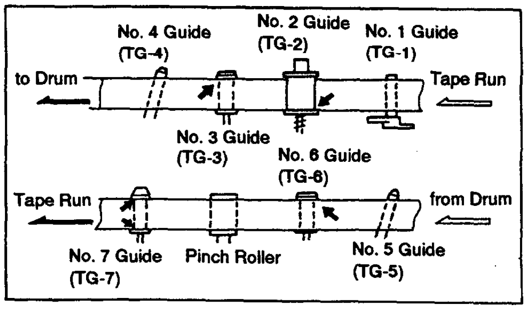

No. 4 Guide (TG-4)
No. 2 Guide (TG-2)
No. 1 Guide (TG-1)
to Drum
Tape Run
No. 3 Guide (TG-3)
No. 6 Guide (TG-6)
Tape Run
from Drum
No. 7 Guide (TG-7)
Pinch Roller
No. 5 Guide (TG-5)

Fig. 4-16.